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CHAPTER 4

Syntax of Avar wh-questions

This chapter contains the discussion of Avar wh-questions, followed by a tentative analysis of the various strategies involved in the derivation of several types of wh-questions. We concentrate on matrix wh-interrogatives containing a single wh-phrase, proposing two basic structures for the *ex-* and *in-situ* orders. Building on the discussion in the preceding chapter, a claim is put forward that the structure underlying both the *ex-situ* and *in-situ* orders is that of a truncated pseudocleft whose presuppositional core corresponds to a relative clause formed via null operator movement within a single derivational layer. The semantic analysis follows closely that of [Beck \(2006\)](#) in viewing Avar wh-phrases as having no other semantic value besides the focus semantic value.

4.1 Introduction

In this chapter I present an overview of the syntax of Avar matrix wh-interrogatives. As the discussion unfolds, we shall see that the range of the observed facts cannot be analysed in a conventional fashion via wh-extraction. These facts include contradictory evidence for and against syntactic movement underlying the derivation of the *ex-situ* order. Instead I will defend the idea that Avar wh-dependencies are hybrid structures which arise via a single mechanism — null operator movement — applied in two distinct ways: the fronted

and right-extraposed *wh*-phrases, I shall argue, occupy the subject position of a predication structure, whereas those *wh*-elements which are left *in situ* are situated inside the relative clause expressing the question's presupposition.

Using English, the structure of an object *wh*-question *What did you see?* with the *wh*-phrase *ex situ* receives the paraphrase in (1).

- (1) What is [what you saw ___]?

The evidence against movement, then, can be accounted for if the *wh*-phrase in (1) is treated as being generated outside of the bracketed presupposition. The dependency between the *wh*-phrase and the gap is, in this instance, established indirectly via a predication relation. As far as the gap is concerned, it results from the movement of a null operator performed to build the relative clause (cf. §3.3). The conflict between evidence favouring both movement and base generation is, therefore, only illusory.

The *in-situ* order, on the other hand, has a more involved structure, paraphrased in (2).

- (2) You are [the one that ___ saw what]?

We shall see on the pages to come that due to the particular semantics of *wh*-phrases (Beck 2006), both (1) and (2) have the same interpretation.

4.2 Data and problem

Recall from the description in Chapter 2 some of the characteristic morpho-syntactic properties of Avar, all of which will play a role in the unfolding discussion.

Firstly, Avar's head-finality (*modulo* some exceptions) and the freedom of constituent ordering will be important in diagnosing biclausality.

- (3) *pro*₁ mašina b-ič- un, muradi-ca₁ mina b-ana
 car.ABS N-sell-CVB Murad-ERG house.ABS N-build.PST
 'Having sold his car, Murad build a house.'

Secondly, the language makes use of both subject and object *pro*-drop.

- (4) was-as₁ mašina b-ič- un, insu- ca *pro*₁ w-uχ- ana
 son-ERG car.ABS N-sell-CVB father-ERG M-beat-PST
 'The son sold the car, and the father beat him up' (Samedov 2003)

4.2.1 Data

Before proceeding to describe the data and the problem they pose, and in order to facilitate understanding of the data to come, I give a brief overview of the morphosyntax of Avar questions and focus constructions.

An important morphosyntactic property of Avar wh-questions, already briefly touched upon on p. 48, concerns the morphological form of the verb. Unlike in regular declarative sentences, the verb is obligatorily participialised:

- (5) a. aħmad aħ- ana
 Ahmed.ABS shout-PST
 ‘Ahmed shouted.’
 b. š:iw aħ- a- ra- w
 who.ABS shout-PST-PTCP-M
 c. *š:iw aħ- ana
 who.ABS shout-PST
 ‘Who shouted?’

Recall that the word order of arguments in an Avar clause is relatively free, and the same is true of most adjuncts, *modulo* some exceptions, such as vP-level adverbials. Similarly, in wh-constructions the question word (*in italics*) can either be fronted (6a), remain *in situ* (6b) or appear at the right periphery of the clause (6c).

- (6) a. š:qj mun ʃod-ul- e- w
 why 2SG:ABS cry- PRS-PTCP-M
 b. mun š:qj ʃod-ul- e- w
 2SG:ABS why cry- PRS-PTCP-M
 c. mun ʃod-ul- e- w š:qj
 2SG:ABS cry- PRS-PTCP-M why
 ‘Why are you crying?’

As (6) illustrates, the adjunct wh-phrase *š:qj* ‘why’ can appear in various positions within the clause.

Question words in argument positions display a similar flexibility with respect to their surface position in the interrogative clause: (7) illustrates this for object wh-questions, whereas (8) and (9) do the same for subject and indirect object wh-questions respectively.¹

1. The reason that (8) only lists two sentences is because the *in-situ* position of the subject is linearly identical to the left-dislocated one.

- (7) a. š:ib heł b-ič- ul- e- b
 what.ABS she:ERG N-sell-PRS-PTCP-N
 b. heł š:ib b-ič- ul- e- b
 she:ERG what.ABS N-sell-PRS-PTCP-N
 c. heł b-ič- ul- e- b š:ib
 she:F N-sell-PRS-PTCP-N what.ABS
 ‘What does she sell?’
- (8) a. ħi- ca mun w-uχ- a- ra- w
 who-ERG 2SG:ABS M-beat-PST-PTCP-M
 b. mun w-uχ- a- ra- w ħi- ca
 2SG:ABS M-beat-PST-PTCP-M who-ERG
 ‘Who beat you up?’
- (9) a. di- ca baš:dab ħi- e b-ič- il- e- b
 1SG-ERG half.ABS who-DAT N-sell-FUT-PTCP-N
 b. ħi- e di- ca baš:dab b-ič- il- e- b
 who-DAT 1SG-ERG half.ABS N-sell-FUT-PTCP-N
 c. di- ca baš:dab b-ič- il- e- b ħi- e
 1SG-ERG half.ABS N-sell-FUT-PTCP-N who-DAT
 ‘Who will I sell the (other) half to?’²

A final point, before we proceed any further, concerns the fact that certain linearisation options, viz. verb-initial ones, are unavailable in *wh*-questions:

- (10) a. *ŋod-ul- e- w mun š:aj
 cry- PRS-PTCP-M 2SG:ABS why
 b. *ŋod-ul- e- w š:aj mun
 cry- PRS-PTCP-M why 2SG:ABS
 (‘Why are you crying?’)

In summary, then, the data presented above raise the following issues. On the empirical side, we must have a way of deriving the different attested place-

2. It has to be noted that more permutations than those indicated in (9) are possible, one of them being the possibility of scrambling the object DP across both the subject and the *wh*-phrase, as in (i) below:

- (i) baš:dab ħi- e di- ca b-ič- il- e- b
 half.ABS who-DAT 1SG-ERG N-sell-FUT-PTCP-N
 ‘Who will I sell the (other) half to?’

I return to the derivation of this naturally occurring order in §4.5.2.4.

ment possibilities of wh-phrases in Standard Avar whilst at the same time ruling out all the unattested verb-initial orders. More precisely, a decision should be made as to exactly what mechanism (i.e. wh-movement or not) underlies the derivation of the attested surface orders. Furthermore, it must be discovered whether these different orders bring about distinct interpretations or whether we are dealing with true optionality. On the theoretical side, we are facing two other problems: if we *are* dealing with optionality, which at first blush seems about right, how do we find room for this optionality in our theory of grammar? Finally, if it turns out that the derivational mechanism behind Avar wh-dependencies cannot be \bar{A} -movement, as I argue is the case, and that languages can choose either \bar{A} -movement or base generation as their strategy of constructing (certain) \bar{A} -dependencies, what is it that determines the particular parameter setting for every given language?

4.2.2 Analytic options

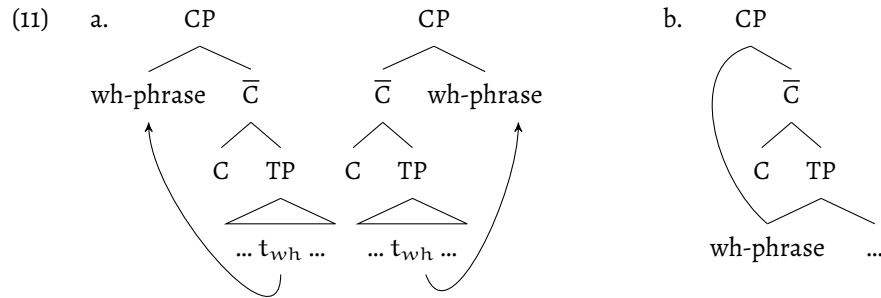
4.2.2.1 Movement or base generation?

To answer our first question, namely what mechanism derives the observed flexibility of wh-phrases choosing their positions in an Avar clause, let us consider the analytic options we have at our disposal and formulate the predictions each of them makes.

One possibility is that Avar does not differ from languages like English with respect to the way of constructing wh-dependencies and displays overt (or covert) movement of its wh-elements to the left periphery of the clause (the precise landing site, whether Spec,CP or Spec,FocP, is insignificant for my purposes at this stage). Structures with right-extraposed wh-elements could, in principle, be derived in a similar fashion save for the direction of wh-movement, which might be stipulated to be rightwards. Both of these alternative derivations are represented in (11) below.^{3,4}

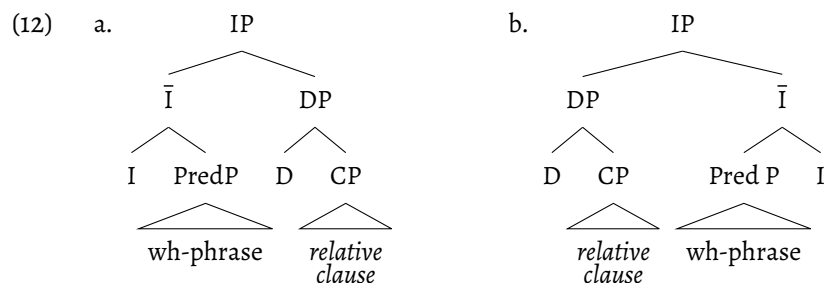
3. Even though the right-hand structure in (11a) represents an instance of rightward wh-movement, it should be noted that rightward wh-movement itself is typologically very rare (Kayne 1994).

4. It goes without saying that there are further analytic options available, such as roll-up movement of the wh-phrase, or remnant movement, but these are necessarily variants of the analysis in (11) involving further derivational steps. In §4.3.3 we return to, and ultimately reject, such an approach as underlying the derivation of the *in-situ* strategy of forming a wh-question in Avar.



Observe that the left- or rightward movement of the *wh*-element to the specifier of *C* does not alter the status of the construction in any significant way by, for instance, transforming a monoclausal structure into a biclausal one. On a Rmerge and multidominance theory of movement ((11) illustrates subject *wh*-movement), moreover, the syntactic and semantic identity of the *wh*-phrase in both base and target positions is a must.

A second line of reasoning, going in the opposite direction and entertained by, amongst others, Potsdam (2006, 2009) for Malagasy *wh*-questions, would assume that rather than moving the *wh*-phrase from its base position at the foot of the \bar{A} -dependency, a language might prefer base generation combined with pseudoclefting. For Potsdam, this structure consists of a *wh*-phrase (plus a possibly null copula) corresponding to the predicative core of the pseudocleft and a headless relative clause expressing its presuppositional part and occupying the subject position (the two structures in (12) differ only with respect to the relative position of the subject and predicate of the pseudocleft, to which I will come later). A crucial difference between the simple *wh*-movement construction and Potsdam's (2006) proposal is the inherent biclausality of the clefted structure: the first clausal element is the presuppositional relative clause whereas the whole pseudocleft is yet a different clause.



The two opposing kinds of analysis described above are not the only ways to go: indeed, there is nothing to stop us taking an intermediate view, namely to find a way of combining the movement and base-generation approaches with either one of these mechanisms preceding, and consequently providing input for the other.

To be able to choose the most appropriate line of analysis, one must understand their predictions, because these predictions will provide the empirical testing ground for our theories, and it is to formulating these predictions that I now proceed.

4.2.2.2 Predictions

It has already been emphasised in the literature on \bar{A} -dependencies (Paul 2001, Potsdam 2006, 2009, Potsdam & Polinsky 2011) that the wh-movement and pseudoclefting analyses make largely identical predictions. There are, however, domains where these predictions differ. One such domain is word order in matrix and embedded clauses.

For those languages whose word order is relatively free, the monoclausal wh-extraction structure considered above seems to be making different predictions with respect to word order than its clefting alternative. This is so because of the frequently observed contrast between the freedom of word order in root and embedded clauses. Consider short wh-movement in (11): as already mentioned, the wh-phrase moving from the base position to the left periphery and adjoining to the root of the tree does not create a biclausal structure. A consequence of that is that the question should still permit the same word-order permutations as in a regular monoclausal environment. Both structures in (12), on the other hand, would arguably impose stricter constraints on word order in the presuppositional relative clause. Thus, extracting the wh-phrase *čto* ‘what’ in Russian, which is a wh-movement language with free word order, does not bleed further rearrangements (13).

- (13) a. *Čto ty mne prinės* [Russian]
 what.ACC 2SG.NOM 1SG.DAT brought
 b. *Ty mne čto prinės*
 2SG.NOM 1SG.DAT what.ACC brought
 c. *Čto ty prinės mne*
 what.ACC 2SG.NOM brought 1SG.DAT
 d. *Ty čto mne prinės*
 2SG.NOM what.ACC 1SG.DAT brought

- e. Prinës ty mne čto
brought 2SG.NOM 1SG.DAT what.ACC
'What have you brought me?'

The availability of the orders presented in (13) contrasts rather sharply with the following data from Turkish. Like Russian, Turkish can be characterised as a discourse configurational language (Ė. Kiss 1998); although generally SOV, the word order can mutate depending on the particular discourse requirements. Regular finite clauses in Turkish can appear in any of the following shapes:

- (14) a. Kadın kitabı okudu. [Turkish]
woman.NOM book.ACC read.PST
b. Kitabı kadın okudu.
book.ACC woman.NOM read.PST
c. Kitabı okudu kadın.
book.ACC read.PST woman.NOM
d. Okudu kadın kitabı.
read.PST woman.NOM book.ACC
'The woman read the book.'

Crucially for my purposes, finite matrix clauses in Turkish, although preferably SOV, can also be verb-initial (14d). In dependent clauses, such as relative clauses (15), verb-initial orders are ungrammatical.

- (15) a. Kitabı okuyan kadın çok akıllı. [Güliz Güneş (p.c.)]
book.ACC read.PTCP woman.NOM very smart
b. *Okuyan kitabı kadın çok akıllı.
read.PTCP book.ACC woman.NOM very smart
'The woman who read the book is very smart'

Another example of a discourse configurational language exhibiting similar contrasts with respect to word order in matrix and embedded clauses is Ossetic: in contrast to root clauses, where the word order is highly flexible, Ossetic embedded clauses cannot be non-verb-final (16b). More precisely, (16a) represents an instance of the Ossetic correlative construction.

- (16) a. soslan-i ni-ccəv-un či kuj-i fənd attəj je=jin
Soslan-OBL PRV-hit-INF what dog-OBL want.PST be.PST.3SG it=DAT.3SG
fə-llikd-əj
PRV-run.PST-PST.3SG

- b. *soslan-i č̣i kuj-i fənd attəj ni-ccəv-un ...
 Soslan-OBL what dog-OBL want.PST be.PST.3SG PRV-hit-INF
 ‘The dog that Soslan wanted to hit ran away.’
 [Ossetic, David Erschler (p.c.)]

Whatever the precise mechanism behind these asymmetries in word order between matrix and subordinate clauses, and inasmuch as a particular language displays such asymmetries, we have now arrived at an important generalisation allowing us to distinguish monoclausal structures from biclausal ones. In §4.3.4 I will use precisely this diagnostic to argue for the biclausality of Avar structures with fronted or extraposed wh-phrases.

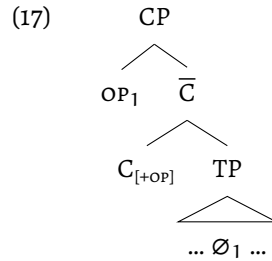
Besides word order, structures like (11) and (12) also make different predictions regarding the placement of predicate-related particles, as has been convincingly argued by E. Potsdam (Potsdam 2006, 2009). For now I leave this test aside, primarily for reasons of the (in)completeness of the data.

4.3 Why can't it be movement?

In this section I discuss empirical and theoretical arguments against a movement analysis of \bar{A} -dependencies involved in Avar wh-questions. Instead, I will demonstrate that it is more plausible to analyse these constructions as arising via external merge and an agree operation parasitic on it, the whole structure projecting a pseudocleft. The empirical side of the argument will consist of two parts: first, I will show that a simple wh-extraction analysis cannot be maintained for wh-phrases appearing either in- or ex-situ. I will then argue for a biclausal approach to wh ex situ. Before doing so, however, I review the diagnostics that allow us to differentiate between movement and base generation.

4.3.1 Movement and base generation: diagnostics

Let us take a step back and consider again the generalised structure of \bar{A} -dependencies, represented in (17), where ‘ \emptyset ’ symbolises a gap which is semantically interpreted as a variable bound by the coindexed operator in the specifier of C. This structure is almost identical to the one in (11) *modulo* the nature of the gap at the foot of the dependency.



It is often tacitly assumed that \bar{A} -dependencies are (mostly) established as a result of movement, and the following phenomena have been used as diagnostics of \bar{A} -movement:


- presence of gap (*terseness* of Johnson 2012 — of the two positions related by movement, only one is pronounced)
- unboundedness
- sensitivity to islands
- crossover effects
- reconstruction effects

Let us discuss each of these tests separately. To begin with, the presence of phonologically unrealised material, or a gap, at the foot of the dependency as such (and, by extension, *Terseness*) cannot be viewed as a movement-specific phenomenon but is equally well-suited to diagnose base-generated structures. Consider (18), which involves a syntactico-semantic dependency between a *wh*-phrase, *which tie*, and some unpronounced material in the object position. Note, however, that this configuration may have arisen as a result of moving, or internally merging, *which tie* from the object position to the specifier of the interrogative complementiser (18a), or by externally merging *which tie* and establishing a syntactic dependency between it and a null *pro* in the base position (18b).


- (18) Which tie will you wear ____?
- Which tie will you wear t?
 - Which tie will you wear *pro*?

In analyses adopting Chomsky's (2000) mechanism of feature valuation both of these dependency-forming operations — wh-movement in (18a) and a syntactic dependency between the wh-phrase and a null element in (18b) — would have to be sensitive to locality constraints, which I will discuss shortly.

Similarly, unboundedness, which refers to the ability of a moved phrase to “travel” across multiple clause boundaries (19), can be modelled as a chain of local agree relations established via external merge — something that has been proposed by Kratzer (2009) to explain the behaviour of indexical pronouns.

- (19) Which tie do you think [she says [I will end up buying t in the end]]?
- 

As (19) clearly shows, at least on the assumption that wh-dependencies in English arise via movement, the wh-phrase *which tie* has crossed at least two clause boundaries on its way to the left periphery of the sentence. It is not unimaginable, however, that rather than having *which tie* move across multiple clause boundaries, we could externally merge it in its surface position:

- (20) Which tie do you think [she says [I will end up buying *pro* in the end]]?
- 

There is, of course, an additional constraint on structures like (20): the outputs of the application of the Agree (feature checking/feature valuation) operation must featurally match every step of the way to yield a coherent, semantically interpretable structure.

Likewise, island sensitivity, despite being considered by many a hallmark of movement, is not unique to it, at least not on the currently popular approach to movement as internal merge.⁵ Indeed, we need a locality domain with a constraint of its own (such as a *phase*, cf. Chomsky 2001) which would constrain both internal, as well as external, Merge (Starke 2001, Adger & Ramchand 2005).⁶ The reason for this is that most theories of movement take movement/Internal Merge to be preceded by an Agree operation between (the features of) a Probe and a Goal. Once such an operation has taken place, the relevant syntactic object can undergo internal merge.

5. On a historiographic note, Boeckx (2012: 15) traces the identification of sensitivity to islands with a syntactic transformation back to Chomsky (1977).

6. For a dissenting view, one that takes external and internal merge to be subject to distinct locality (and minimality) constraints, see Bošković 2007.

(21) Adjunct Island

- a. He has no pocket square because he's wearing a bow tie.
- b. *What does he have no pocket square because he's wearing t?

We can thus make a preliminary conclusion that at least half of the tests allow for a plausible reinterpretation of movement-derived structures as those involving base generation. Put differently, they can be used as diagnostics of \bar{A} -dependencies more generally, not necessarily movement-based ones.

What about the remaining tests? It appears that they *can* be used to discriminate between external and internal merge. Let us see how they work.

The first test in this group of phenomena are crossover effects, which refer to the inability of non-referential DPs (such as *wh*-operators or quantifiers) in a derived position to bind pronouns which they do not already c-command from their base position. (22b) illustrates what has come to be known as *Weak Crossover*, whereas the ungrammatical structure in (23b) is said to involve *Strong Crossover*.⁷

- (22) a. Who₁ hates his₁ older brother?
- b. *Who₁ does his₁ older brother hate t₁?
- (23) a. Who₁ hates himself₁?
- b. *Who₁ does he₁ hate t₁?

The assumption that crossover effects may arise due to the movement of a phonologically null operator has become common currency in contemporary syntactic theory. It is movement of this null operator which is argued to be implicated in causing the weak crossover effects even in those relative clauses which contain no overt relative pronoun, illustrated for English in (24) below.

- (24) *the man₁ his₁ mother saw

Now to our next test. Some syntactic dependencies involving movement, \bar{A} -dependencies amongst them, differ from similar-looking base-generated dependencies with respect to (syntactic) reconstruction effects. Syntactic re-

7. Crucially for my purposes, the argument from crossover effects can only withstand scrutiny on the assumption that crossover effects are distinct from Principle C effects and can therefore not be reduced to them, Principle C being further eliminated from the syntax (Evans 1980, Reinhart 1983). This idea receives intuitive support from the fact that, unlike Principle C, strong crossover effects *cannot* be obviated via appropriate context manipulation. The term *crossover* goes back to Postal (1971), and the strong vs. weak distinction was introduced by T. Wasow (cf. Wasow 1972).

construction refers to the fact that for a number of interpretational procedures (such as scope assignment or binding theory), moved constituents behave as though in their base position.

- (25) [Which pictures of himself₂]₁ did Mary say [every boy]₂ would have to burn t₁?
- a. [which]₁ did Mary say every boy₂ should burn [t₁ pictures of himself₂]
 - b. did Mary say every boy₂ should burn [which pictures of himself₂]

In (25) the moved wh-phrase *which picture of himself* contains a reflexive anaphor, which, as we know for English, must be bound by a c-commanding antecedent, something that is certainly not the case considering the wh-phrase c-commands *every boy*, the reflexive's binder.⁸ A plausible assumption (particularly so on the copy theory of movement) is that the moved wh-phrase (or at least its restrictor) "reconstructs" at LF for the purposes of interpretation so that the reflexive inside it can be semantically bound by *every boy*. How exactly we go about formalising reconstruction (i.e. whether the moved item literally moves back into its original position at LF, or the lower copy is interpreted, or, on a multidominance view, whether the quantifier and restrictor are merged in the corresponding positions) is immaterial for my current purposes, but it can definitely be used to diagnose movement.⁹

Reconstruction effects have frequently been diagnosed in the literature in at least three distinct environments. The first two — Principle A and Principle C effects — are related to binding. Reconstruction effects inducing a Principle A violation have just been illustrated in (25) above, whereas (26) is an example of unacceptability that results from the interaction of Principle C and reconstruction.

- (26) * [Which picture of John₁]₂ did he₁ buy yesterday t₂?

The sentence in (26) is often claimed to be bad precisely because, for the purposes of interpretation, the wh-phrase *which picture of John* reconstructs to the base position thus leading to a proper name, *John*, being c-commanded by a coindexed pronoun, in clear violation of Principle C.

The third way to test reconstruction, which we have already touched upon in §3.2.3, is with the help of idioms, provided that we accept Chomsky's (1993)

8. Accidental coreference is out of the question here, as the reflexive's antecedent, *every boy*, is non-referential (Büring 2005).

9. I am carefully avoiding the so-called *semantic reconstruction* here and talking exclusively about syntactic reconstruction.

argument that for the idiomatic reading to arise, the idiom's parts must be adjacent at LF.

(27) John wondered which picture of himself Bill took t.

- a. John wondered [which x, x a picture of himself] [Bill took x]
- b. John wondered [which x] [Bill took [x picture of himself]]

(Chomsky 1993: 39)

Chomsky argues that the idiomatic reading of *to take a picture*, which can be paraphrased as *to photograph*, is only available given the structure in (27b), where *took* and *picture* are adjacent. The compositional reading, roughly corresponding to a transfer-of-possession relation, arises from the structure in (27a).

Summing up, if a hypothesised \bar{A} -construction in a given language disallowed analogues to (25) due to a Principle A effect, but allowed analogues to (26) whilst also displaying no idiomatic readings with discontinuous parts of idioms, we could make the conclusion that the structure in question is not created via movement.

A final test to discriminate between movement and base generation was proposed by Adger & Ramchand (2005), which they dub *identity effects*. Identity effects, in essence, might be thought of as a subset of reconstruction effects but in the domain of morphology/morphosyntax: if a constituent has undergone movement, it must be able to also occur in the base position. If movement is nothing more than just remerge, this is expected; otherwise, no morphosyntactic identity is necessary. Adger & Ramchand's (2005) data are from Scottish Gaelic, where the fronted *wh*-phrase involved in relativisation is not morphologically compatible with originating in the base position of the dependency:

- (28) a. Chuir thu am peann anns a'bhocsa.
 put-PST you the pen in-DEF the box-DAT
 'You put the pen in the box.'
- b. Dè am bhocsa a chuir thu am peann ann/*anns
 which the box C-REL put-PST you the pen in-3SG/*in-DEF
 'Which box did you put the pen in?' (Adger & Ramchand 2005: 169)

It is a well-established empirical generalisation that Gaelic prepositions morphologically agree with their complement in definiteness: the DP *a'bhocsa* 'the box' in (28a) is definite and thus requires that the preposition should appear with a definiteness marker. When the very same definite DP (*modulo* the *wh*-word) is fronted, however, the stranded preposition cannot be marked for

definiteness (28b).¹⁰

Here is the revised list of diagnostics:

- | | |
|--------------------------|---|
| • presence of gap | [t or <i>pro</i> — both Move and Merge] |
| • unboundedness | [both Move and Merge] |
| • sensitivity to islands | [both Move and Merge] |
| • crossover effects | [only Move] |
| • reconstruction | [only Move] |
| • identity effects | [only Move] |

In summary, as far as \bar{A} -dependencies are concerned, neither the presence of a gap, unboundedness or island-sensitivity can unequivocally be taken to signal that \bar{A} -movement is implicated in creating these dependencies. If, on the other hand, a given language displays no crossover effects, no reconstruction effects or identity effects, we have strong reason to believe that (a relevant subset of) its \bar{A} -dependencies are established by first merge/base generation. In the rest of this section I demonstrate that Avar is one such language to the extent that its *wh*-phrases in *ex-situ* environments are not in a direct \bar{A} -dependency with the gap. Anticipating the analysis in §4.5, I interpret the results of the remaining tests as signalling \bar{A} -movement of a null operator.

4.3.1.1 Presence of a gap

It can be deduced from the *ex-* vs. *in-situ* distinction (p. 111) that Avar *wh*-questions display variable behaviour as far as the presence of a gap at the foot of the operator–variable dependency is concerned: the gap is trivially present in the *ex-situ* cases, which is not the case when the *wh*-phrase appears in what is its canonical position.

- (29) kinab mac' duda _____ la- l- e- b
 duda kinab mac' la- l- e- b
 which language 2SG.LOC which language know-PRS-PTCP-N
 ‘What language do you know?’

10. I return to another class of morphological identity effects (case connectivity) in §§4.4 and 4.5.2.1.

As shown above, the presence of a gap cannot unambiguously be interpreted as an unpronounced copy of a moved constituent. It is, however, also the case that the absence of a gap does not unequivocally indicate the absence of movement. In both cases independently available alternative analyses can be given. I return to this in §4.3.3 when I discuss, and ultimately reject, the possibility of deriving the *in-situ* position of Avar wh-phrases as resulting from a combination of multiple movement steps.

4.3.1.2 Locality constraints on wh-questions

Another asymmetry between the two strategies of forming a wh-question concerns their sensitivity to locality constraints. The asymmetry is illustrated for the adjunct island, the coordinate structure constraint, and the complex noun phrase constraint.

For the adjunct clauses, recall from §2.2.5.2 that these appear in Avar as converbial clauses. This is illustrated in the baseline examples (30a–d) for a variety of possible positions for the adverbial clause.

- (30) a. dun roq'o-w-e ana [rasul w-ač'- a- rawgo]
 2SG:ABS home-M-LAT go.PST Rasul.ABS M-come-PST-CVB
- b. [rasul w-ač'- a- rawgo] dun roq'o-w-e ana
 Rasul.ABS M-come-PST-CVB 2SG:ABS home-M-LAT go.PST
- c. dun [rasul w-ač'- a- rawgo] roq'o-w-e ana
 2SG:ABS Rasul.ABS M-come-PST-CVB home-M-LAT go.PST
- d. roq'o-w-e dun ana [rasul w-ač'- a- rawgo]
 home-M-LAT 2SG:ABS go.PST Rasul.ABS M-come-PST-CVB
 'You went home when Rasul arrived.'

The temporal adverbial clause is postposed relative to the matrix clause in (30a), preposed with respect to it in (30b), and interrupting it in (30c). The sentence in (30d) demonstrates that the constituent order inside the matrix clause need not be fixed in the presence of an adjunct clause.

In order to test whether Avar wh-questions are sensitive to islands only the orderings can be used where the adjunct clause is either postposed or intraposed with respect to the matrix clause, since preposing an adjunct clause would create a string-vacuous configuration where a wh-phrase appearing at the left periphery could be interpreted as the movement of the wh-phrase internally to the adjunct clause. With this in mind, let us consider the following minimal pair:

- (31) a. mun roq'owe [š:iw w-ač'- a- rawgo] a- ra- w
 1SG.ABS home.M.LAT who.ABS M-come-PST-CVB go-PST.PTCP-M
 'I went home when who arrived?'
 b. *š:iw mun roq'owe [__ w-ač'- a- rawgo] a- ra- w
 who.ABS 1SG.ABS home.M.LAT M-come-PST-CVB go-PST.PTCP-M
 (*'Who did I go home when arrived?')

The acceptability of (31a), where the wh-question interpretation is available despite the wh-phrase being trapped inside an opaque domain, can be taken as demonstrating the insensitivity of the *in-situ* strategy to locality constraints. The *ex-situ* version, however, is well-behaved in displaying the unacceptability status attributable, under the view that takes syntactic relations to be constrained by a locality mechanism, to an attempt of establishing such a relation across an island boundary.^{11,12}

The same result is delivered in coordinate structures where one of the coordinands is a wh-phrase, but before discussing it I provide a brief description of the coordination strategies available in Avar.

The most common coordination strategy, illustrated in (32a), consists in adding the coordinating particle =*gi* to every conjunct. Alternatively the conjuncts can be connected by the conjunction *wa*, as in (32b).

11. Notice that I only provide those *ex-situ* examples where the wh-phrase appears to the left of the remainder of the clause. The reason for this is that, at least as far as the adjunct clauses are concerned, placing the wh-item at the right periphery produces an acceptable sentence with a different interpretation. This is visible in (i) below, where the two structures are disambiguated via bracketing.

(i) [mun roq'o-w-e w-ač'- a- rawgo] š:iw a- ra- w
 *mun [roq'o-w-e w-ač'- a- rawgo š:iw] a- ra- w
 1SG.ABS home-M-LAT M-come-PST-CVB who.ABS go-PST.PTCP-M
 'Who left when I came home?'
 ('Who did I go home when came?')

12. As is common with strong islands (Boeckx 2008), one way of obviating the island effect is by virtue of pied-piping: if the rest of the island is fronted together with the wh-phrase, the question becomes acceptable.

(i) [š:iw w-ač'- a- rawgo] mun roq'o-w-e a- ra- w
 who.ABS M-come-PST-CVB 1SG.ABS home-M-LAT go-PST.PTCP-M
 'When who came did I go home?'

It is perhaps worth mentioning that unlike its English translation, the question in (i) has no echo-tint to it.

- (32) a. co bixinči-jas b-os- ana ču= gi ĥama= gi
 one man- ERG N-buy-PST horse.ABS=CNJ donkey.ABS=CNJ
 'A man bought a horse and a donkey.'
- b. aĥmadi-ca ču wa ĥama b-os- ana
 Ahmed- ERG horse.ABS and donkey.ABS N-buy-PST
 'Ahmed bought a horse and a donkey.'

Even though I only use the (a)-strategy for the purposes of demonstration, the *in-* vs. *ex-situ* asymmetry presented below extends to the (b)-strategy as well.

Now, if one of the conjuncts were a *wh*-phrase appearing *in situ*, the question would be judged as acceptable, provided that the verb is realised as a participle.

- (33) a. co bixinči-jas ču= gi š:ib= gi b-os- a- ra- b
 one man- ERG horse.ABS=CNJ what.ABS=CNJ N-buy-PST-PTCP-N
 'A man bought a horse and what (else)?'
- b. co bixinči-jas š:ib= gi ĥama= gi b-os- a- ra- b
 one man- ERG what.ABS=CNJ donkey.ABS=CNJ N-buy-PST-PTCP-N
 'A man bought what and a donkey?'

It can be seen from the acceptability of both sentences above that the *in-situ* strategy is applicable when the *wh*-phrase is confined to a coordinate structure. I give two examples rather than one to demonstrate that this observation holds irrespective of which particular conjunct appears as the *wh*-item.

If the *wh*-conjunct appears *ex situ*, however, the resulting string is judged as unacceptable, there being no difference with respect to which of the conjuncts is extracted:

- (34) a. *š:ib= gi co bixinči-jas [__ ĥama= gi] b-os- a- ra- b
 what.ABS=CNJ one man- ERG donkey.ABS=CNJ N-buy-PST-PTCP-N
 ('What did a man buy __ and a donkey?')
- b. *š:ib= gi co bixinči-jas [ču= gi __] b-os- a- ra- b
 what.ABS=CNJ one man- ERG horse.ABS=CNJ N-buy-PST-PTCP-N
 ('What did a man buy a horse and __?')

Pied-piping the island yields the expected result, rendering the question acceptable:

- (35) a. š:ib= gi ĥama= gi hes b-os- a- ra- b
 what.ABS=CNJ donkey.ABS=CNJ he.ERG N-buy-PST-PTCP-N
 'What and a donkey did he buy?'

- b. ču= gi š:ib= gi hes b-os- a- ra- b
 horse.ABS=CNJ what.ABS=CNJ he.ERG N-buy-PST-PTCP-N
 ‘A horse and what did he buy?’

Finally, the same asymmetry as the one observed above obtains in cases involving a complex NP. Even though we have seen an ample number of examples of relativisation in the preceding chapter, I provide a baseline sentence in (36).

- (36) diqe b-il- ana [insuca die l'- u- ra- b t'ex]
 1SG.APL N-lose-PST father.ERG 1SG.DAT give-PST-PTCP-N book.ABS
 ‘I have lost the book that my father gave me.’

Just as is the case with the strong islands which we have already considered, the *in-situ* variant of a wh-question can be formed successfully if the wh-phrase appears inside the relative clause (37).

- (37) duqe [lica due l'- u- ra- b t'ex] b-il- a- ra- b
 2SG.APL who.ERG 2SG.DAT give-PST-PTCP-N book.ABS N-lose-PST-PTCP-N
 ‘You have lost the book that who gave you?’

Fronting the wh-phrase originally belonging inside the relative clause leads, as expected, to unacceptability:

- (38) *lica duqe [due l'- u- ra- b t'ex] b-il- a- ra- b
 who.ERG 2SG.APL 2SG.DAT give-PST-PTCP-N book.ABS N-lose-PST-PTCP-N
 (‘Who did you lose the book that __ gave you?’)

Pied-piping the whole complex noun phrase, once again, ameliorates the fronting:

- (39) [lica due l'- u- ra- b t'ex] duqe b-il- a- ra- b
 who.ERG 2SG.DAT give-PST-PTCP-N book.ABS 2SG.APL N-lose-PST-PTCP-N
 ‘You lost the book given to you by whom?’

To sum up the data presented above, Avar wh-questions are sensitive to islands but only if the wh-phrase appears *ex situ*, the *in-situ* option being freely available. We return to this asymmetry in §4.3.3 below.

The discussion of locality with reference to wh-questions would be incomplete if it did not touch upon the curious property of Avar relativisation discussed in §3.2.5, namely the lack of unboundedness typically associated with \bar{A} -dependencies. Since we have already seen that long-distance wh-questions are possible across one participial clause boundary, I proceed directly to describing the properties of long-distance questions when more than one clause

boundary is involved.

4.3.1.3 Reconstruction

I begin by considering reconstruction effects in Avar, or rather, lack thereof. Before doing so, however, let us make sure that in regular declarative sentences Principle C effects not only exist but are also very strong:

- (40) a. rasuli-ca ži- w= go č'wana.
 Rasul-ERG self-M:ABS=EMPH kill.PST
 'Rasul killed himself'
- b. *žin-ca= go / *hes rasul č'wana.
 self-ERG-EMPH / he.ERG Rasul.ABS kill.PST
 ('Rasul killed himself) [Principle C violation]

Recall from chapter (2) that in Avar transitive clauses it is the ergative subjects that can bind reflexive pronouns in their c-command domain (40a). The converse, on the other hand, is ungrammatical: ergative-marked pronouns, whether reflexive or otherwise, must not c-command absolutive R-expressions with which they are supposed to be coindexed. (40b) is, therefore, a run-of-the-mill violation of Principle C that is as bad as its English counterpart.

Now, wh-questions differ from regular declaratives in that there are no Principle C effects arising due to the wh-phrase reconstructing to its base position (41b), unlike in English (41a). Put differently, the anaphoric demonstrative *hej* 'she', marked with the dative case, *can* be coindexed with a proper name that, on an \bar{A} -movement approach, it would c-command.¹³

- (41) a. *Which picture of John₁ did he₁ buy yesterday?
- b. [aminat-il haq'aɭɭ b-uge- b kina- b xabar] heɭ-ie
 Aminat-GEN about N-be.PRS:PRT-N which-N story.ABS she-DAT
 (žind-ie= go) biš:ungo b-oɭ'ule- b
 self- DAT=EMPH the.most N-like.PRS:PRT-N
 'Which story about Aminat₁ did she₁ (herself) like the most?'

Facts like this are our first empirical evidence against an \bar{A} -movement approach to Avar wh-fronting as it is certainly more natural to take the wh-phrase to be generated outside the c-command domain of the pronoun than to analyse

13. Speakers admit that structures like (41b) are not the most elegant way of expressing the desired coreference, but unlike their English counterparts, they are far from being considered ungrammatical. As is often the case crosslinguistically, the judgements become even more robust once we adjoin an adnominal intensifier *žindiego* 'self.DAT' to the pronominal subject.

it as having undergone \bar{A} -movement and then either devise a way for reconstruction to be blocked or relax the definition of Principle C in a manner that, given identical hierarchical relations between a proper name and a pronoun c-commanding it, would enforce Principle C in simple declarative sentences but obviate it in questions.

A note of caution here: it is in fact possible that the acceptability of (41b) has little to do with reconstruction as such. Observe that the referential DP *Aminat* is contained inside a relative clause with the meaning *which story that is about Aminat*, which, being an adjunct, might give rise to the so-called *Lebeaux effects* first introduced by David Lebeaux (Lebeaux 1985, 1990, 2009). Lebeaux effects refer to the contrast in certain kinds of Principle C violations and obviation:

- (42) a. Which claim that Harry₁ had made did he₁ later reject?
 b. *Which claim that Harry₁ is an idiot did he₁ dismiss as nonsense?

In light of the contrast between (42a) and (42b) a number of proposals have been made in the literature arguing for the *late merger* of adjunct material: the complex wh-phrase *which claim that Harry had made* contains a relative clause containing a proper name. This relative clause, some would argue, is merged later than the antecedent, effectively obviating Principle C effects which simply do not arise: when the moved wh-phrase reconstructs, the proper name is not there yet, and none of the binding principles are violated. In (42b), on the other hand, there is no way for the proper name to be late-merged, since it is contained within the argument of *claim*, hence the observed ungrammaticality.¹⁴

In order to rule out a late-merger explanation of the acceptability of proper names inside complex wh-phrases coreferring with pronouns in subject position, consider (43), which contains no relative clause and the wh-word is *how many* instead of *which*.

- (43) ʕali-l ħaq'aɫ čan xabar hes bic-a- ra- b
 Ali- GEN about how.many story.ABS he.ERG tell-PST-PRT-N
 'How many stories about Ali₁ did he₁ tell?'

In (43) the proper name, *Ali*, is the complement of a postposition, and the whole PP is the argument of the complex wh-phrase *how many stories*, just like in (42b) from English, except for the grammaticality judgement.

To see that this pattern is more general and not a peculiar 'quirk' of the

14. It appears that adopting a late-merger approach to the syntax of adjuncts has serious implications for the syntax of relativisation, as it is arguably incompatible with the head-raising analysis of relative clauses.

postposition *ħaq'alul* 'about', consider another example:

- (44) prezidentas-ul čan kayat hesu-qe (žindi-qe= go)
 President- GEN how.many letter.ABS he- APL self- APL=EMPH
 b-ač'- a- ra- b
 N-come-PST-PRT-N
 'How many letters from the President₁ did he₁ receive?'
 'How many of the President₁'s letters did he₁ receive?'

In (44) the genitive-marked DP *the President* is the argument of *letter*, descriptively speaking (to eliminate the possibility of Lebeaux effects) and can be coindexed with the demonstrative in subject position, just like we have seen for *which story* and *how many stories*.¹⁵

We have seen that structures involving wh-fronting display no Principle C effects parasitic on reconstruction thus providing a first indication that they might arise by base-generating the wh-phrase outside the position of the gap, followed by establishing an Agree relation of sorts to create a syntactic dependency.

Because so far I have only been considering fronted wh-phrases, the question of whether sentences with *in-situ* orders behave in an identical fashion with respect to reconstruction effects is an important one. The data in (45), (46) and (47) below demonstrate that there is an acceptability contrast between the *ex-* and *in-situ* orders.

- (45) *hes [ʃali-l ħaq'alul čan xabar] bic-a- ra- b
 he.ERG Ali- GEN about how.many story.ABS tell-PST-PRT-N
 'How many stories about Ali₁ did he₁ tell?'

In (45) the complex wh-phrase occupies the preverbal position — the canonical object position in SOV languages, and unlike its counterpart with wh-fronting (43), this sentence disallows coreference between the proper name and the demonstrative c-commanding it.

Example (46), itself the *in-situ* counterpart of (44), displays exactly the same ungrammaticality:

15. A variant of this structure would have *the President* assume ablative case instead of the genitive:

- (i) prezidentas-dasan čan kayat hesu-qe (žindi-qe= go) b-ač'- a- ra- b
 President- ABL how.many letter.ABS he- APL self- APL=EMPH N-come-PST-PRT-N
 'How many letters from the President₁ did he₁ receive?'

Observe, however, that nothing changes here with respect to coreference: the R-expression and the pronominal still can corefer.

- (46) *hesu-qe (žindi-qe= go) [prezidentas-ul čan kayat]
 he- APL self- APL=EMPH president- GEN how.many letter.ABS
 b-ač'- a- ra- b
 N-come-PST-PRT-N
 'How many letters from the President₁ did he₁ receive?'

Observe that unlike previously, the presence or absence of an adnominal intensifier is immaterial for the judgement at hand.

The next sentence shows that the contrast in Principle C effects is not sensitive to the argument/adjunct distinction: in it, the proper name is contained inside an attitude report which itself appears inside a relative clause, a state of affairs problematic for various late-merger analyses of adjunction, as the observed Principle C effect remains unexplained.

- (47) *hesu-qe (žindi- qe= go) [[prezident xwan= ilan qw- a- ra- b]
 he- APL himself-APL=EMPH president.ABS die.PST=COMP write-PST-PRT-N
 čan kayat] b-ač'- a- ra- b
 how.many letter.ABS N-come-PST-PRT-N
 'How many letters about the President's₁'s death did he₁ receive?'

In summary, with respect to syntactic reconstruction effects, we have observed that in the case of *wh-ex situ* the *wh*-phrase does not reconstruct into its purported original position at the foot of the \bar{A} -dependency thus yielding no Principle C effects. As for the *in-situ* cases, they display a very dissimilar behaviour in that they give rise to Principle C effects. It could be argued, in principle, that these cases involve *wh*-movement followed by genuine reconstruction of the sort observed in English, only then one would have to come up with a story for why this reconstruction happens *overtly* whilst also explaining the lack of reconstruction effects with *wh-ex situ*. An alternative would be to say that both types of *wh*-dependency involve base generation of two different kinds. As it is unclear to me how plausible the first view is, in the rest of this chapter I will pursue the alternative view. Before doing so, however, I would like to present additional data against analysing Avar *wh*-questions as involving \bar{A} -movement.

4.3.1.4 Crossover Effects

Recall from the discussion above that English sentences like (48a) are ungrammatical on the reading presented in (48b), the Strong Crossover effect observed with \bar{A} -movement.

- (48) a. *Who₁ does he₁ love t₁?
 b. for what x, x loves x?

A very peculiar feature of Avar is that Strong Crossover effects like those in (48a) are absent in *wh*-questions (49b), polar questions (50b) and focus sentences (51b). I have also included regular baseline examples to facilitate comparison.

- (49) a. li- ca ži- w= go č'w-a- ra- w *Wh-Questions*
 who-ERG self-M:ABS=EMPH kill- PST-PRT=M
 'Who killed himself?'
 b. š:iw žin- ca= go č'w-a- ra- w
 who.M:ABS self-ERG=EMPH kill- PST-PRT=M
 'Who killed himself?'
 (50) a. rasuli-ca ži= w- go- jiš: č'w-a- ra= w *Polar Questions*
 Rasul-ERG self=M:ABS-EMPH-Q kill- PST-PRT=M
 'Did Rasul kill himself?'
 b. žin- ca- go- jiš: rasul č'w-a- ra= w
 self-ERG-EMPH-Q Rasul.ABS kill- PST-PRT=M
 'Did Rasul kill [himself]_F?'
 (51) a. rasuli-ca ži= w- go č'w-ana *Focusing*
 Rasul-ERG self=M:ABS-EMPH kill- PST
 'Rasul killed himself.'
 b. žin- ca- go- xa rasul č'w-a- ra= w.
 self-ERG-EMPH-FOC Rasul.ABS kill- PST-PRT=M
 'Rasul killed [himself]_F.'

These structures contrast rather sharply with regular declarative sentences such as (40) on p. 128, which display robust Principle C effects. Assuming that the ungrammaticality of sentences like (48a) is due to movement (and not just Principle C, Buring 2005), we can take the acceptability of (49b), (50b) and (51b) to be indicative of base generation.

So far we have been examining the evidence in favour of a base-generation analysis of a number of Avar \bar{A} -dependencies (*wh-ex situ* and relativisation) and against deriving those dependencies via a simple instance of \bar{A} -movement. Even though we have established an important contrast in Principle C effects between the two different types of *wh*-questions, it is *wh-ex situ* that has been in our focus thus far. *In-situ* structures, however, are no less problematic, and

in the following two subsections I will consider further evidence against a wh-extraction analysis of either *in-* or *ex-situ* wh-constructions.

4.3.2 Against an optional wh-movement analysis

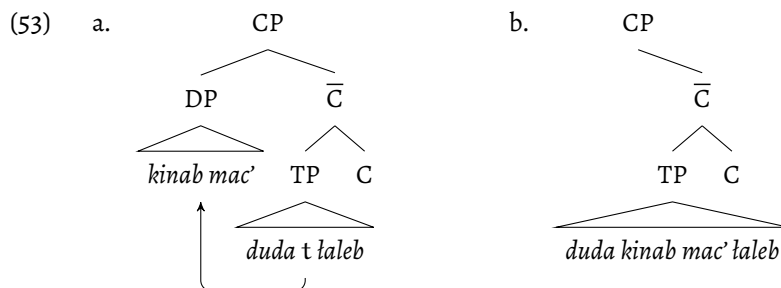
Let us consider how the *ex-* and *in-situ* orders can be derived in a framework allowing optional wh-movement. Depending on how syntactic movement is treated there are at least two large groups of such analyses, both of them being discussed immediately below. For concreteness, we shall be trying to derive the orders in (52).

- (52) a. kina- b mac' duda la- l- e- b
 which-N language.ABS 2SG:LOC know-PRS-PTCP-N
 b. duda kina- b mac' la- l- e- b
 2SG:LOC which-N language.ABS know-PRS-PTCP-N
 ‘What languages do you know?’

The main factor distinguishing the two optional wh-movement analyses discussed below concerns the nature of syntactic movement, *viz.* whether syntactic movement must be triggered.

4.3.2.1 Wh-movement must be triggered

Arguably the simplest approach would analyse (52a) as involving \bar{A} -extraction of the wh-element and (52b) as being generated in the absence of such movement. This is, in fact, the analysis developed by Slade (2011) for the optional wh-movement in Sinhala, a language that, at least on the surface, has striking morphosyntactic similarities in the domain of \bar{A} -dependencies with Avar. Approximate structures for (52a) and (52b) are schematised in (53a) and (53b) respectively, with the featural dependency between C and the wh-phrase assumed but not indicated in the trees.



Perhaps the most popular approach to wh-movement in the generative literature has it that wh-movement must be triggered, either by the feature-checking requirements of particular (functional) heads (Adger 2003) or by dedicated movement-inducing features, which have at different stages been referred to as EPP-features (Chomsky 2000) and edge features (Chomsky 2001, Müller 2011). As stated above, the trees in (53) presuppose that the featural dependency between the wh-features on C and the interrogative phrase can be established *in situ*, hence the movement of the wh-phrase to the specifier of interrogative C, if triggered at all, is triggered by virtue of C carrying an EPP-feature.

The optional wh-movement analysis is therefore able to derive the *ex-situ* order. In order to account for the possibility of the *in-situ* orders, however, it is forced to admit that the movement-triggering EPP-feature on C is only optionally present, and in cases where C has no EPP-feature no wh-movement is triggered. And even though such frameworks as Chomsky 2000, 2001 have enough room to accommodate optionality, there must be a reason for an optional operation, such as endowing an interrogative complementiser with an EPP-feature in a selected subset of cases rather than universally, to apply, as indicated in the following quote from Chomsky 2001.

The natural suggestion [for constraining optional operations — PVR]
... is a general economy principle: an optional rule can apply only
when needed to yield a new outcome. (Chomsky 2001: 34)

Therefore, the approach that appealed to wh-movement in order to derive the *ex-situ* placement of wh-phrases would have to motivate the absence of the trigger for the *in-situ* cases such as (52b) depicted in (53b).

Such an analysis also seems inferior to the base-generation approach when it comes to empirical coverage, as it will have serious difficulties accounting for the lack of reconstruction and crossover effects with *ex situ* wh-phrases, which is why I shall not pursue it any further.

4.3.2.2 Wh-movement applies freely

The assumption that syntactic movement must invariably be triggered is no less problematic, conceptually speaking, than the optional applications of syntactic operations, as noted by Chomsky himself in Chomsky 2007 *et seq.*

As an alternative to the more common feature-driven view of the syntax of wh-questions Šimík (2012) develops an analysis where (criterial) wh-movement is presented as being interface-driven: since syntactic movement

is nothing more than another instance of the basic combinatory, set-forming operation merge (Chomsky 2007, 2013, Šimík 2012), it is no longer possible to appeal to such economy conditions as Merge-over-Move of earlier proposals (Chomsky 2000).¹⁶

Under a free wh-movement approach such as the one of Šimík 2012 the structures for the *ex-* and *in-situ* orders in (52) will remain the same as sketched in (53) above, and the optionality problem, or the problem of motivating the application of wh-movement will not arise. Instead, a free wh-movement analysis faces the issue of assigning the right semantic interpretation to the *in-situ* structure in (53b), since, as already mentioned, internal merge is driven by the requirements of the component responsible for semantic interpretation. In particular, Šimík (2012) analyses questions as involving a question operator that combines with a λ -abstract created by the application of wh-movement. He also assumes that those languages which make use of the *in-situ* strategy of creating constituent questions establish the relation between the question operator and the variable indirectly. This effectively resurrects the optionality problem, at least until it is demonstrated (i) that both the direct and indirect strategies of linking the question operator and the variable are available within one given language, and (ii) how the choice of strategy is regulated.

We must not forget that the optional wh-movement analyses leave a number of phenomena unexplained. In particular, additional mechanisms are required to account for the absence of reconstruction effects in the *ex-situ* cases, just as we have seen in §4.3.2.1. Nor can these analyses explain the peculiar participial morphology on the verb whenever a wh-phrase is present in the sentence.

4.3.3 Against an obligatory roll-up movement analysis of *wh-in situ*

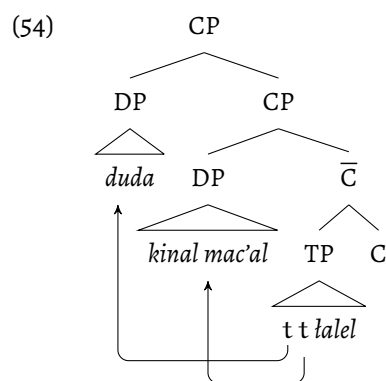
As follows from the foregoing discussion, to rescue a free wh-movement analysis of Avar constituent interrogatives something has to be done about the *in-situ* orders. A question worth asking is whether the *in-situ* position of the wh-element is indeed its base position or whether it is a derived position with the *in-situ* order arising from further movements across the wh-phrase.

As Kayne's (1994) *Antisymmetry* framework became popular, such 'masked-

16. One of the goals of Šimík's (2012) manuscript is to dissociate wh-movement from movement to the complementiser domain by showing that wh-phrases can appear at the edge of constituents as small as vP, NP or AP in addition to the usual CP. This is, although crucial for Šimík's (2012) purposes, orthogonal to mine. I do, however, sympathise with Šimík's main goal of eliminating formal wh-features from the narrow syntax altogether.

movement' analyses have been proposed to account for the possibility of having a unified view of *wh*- and focus-movement in those languages that nevertheless allow (optional) *wh-in-situ*. Analysing the *in-situ* positions of *wh*-phrases in Malayalam, for instance, Jayaseelan (2001) assumes, after Kayne (1994), an Antisymmetry-inspired analysis with *Spec* > *Head* > *Comp* as an underlying order supplemented by a Focus projection right above *vP* to which *vP*-internal arguments can migrate. A similar analysis of *in-situ* questions in Spanish is offered by Uribe-Etxebarria (2002).

Applying an analysis along these lines to our cases in (52), the structure for the *ex-situ* example is as already schematised in (53a). It is also the base structure for the *in-situ* order, which obtains after the locative-marked subject of *la-* 'know' is moved across the extracted *wh*-phrase, as shown in (54) below.¹⁷



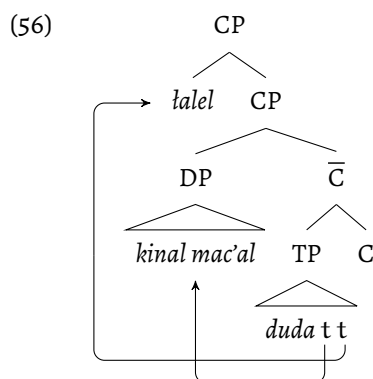
It appears, then, that further empirical evidence is required before we can discard such a roll-up movement analysis as depicted in (54) in favour of the one I have already begun sketching. Avar (as well as several of its neighbouring languages) provides us with at least two ways of doing so. I owe these two arguments to Kazenin (2002).

First, Jayaseelan's (2001) approach predicts, in principle, that following the initial extraction of the *wh*-phrase to a *vP*-external position, any constituent and not just the subject should be able to move across it to the position I

17. In the representation in (54) I have put the subject's derived position as another specifier of the same complementiser as the one whose specifier position is occupied by the moved *wh*-item *kinab mac* 'which language'. The only reason for this is to save vertical space by omitting a layer of functional structure putatively responsible for attracting the sentential subject, as other possible variants would involve the presence of a *Top**-head above the one attracting the *wh*-phrase. Analyses differ as far as the exact positions of these attractors are concerned, with Jayaseelan (2001) putting them just above the *vP*, as opposed to Uribe-Etxebarria (2002), who locates these heads in the cartographic split CP. As far as I can tell, nothing hinges on this.

have notated as the outer specifier of CP separately, and one of the possible outcomes would be a verb-initial order such as the one given in (55), and graphically represented in (56), below for a constituent interrogative — something that never happens. Daghestanian data suggests, on the contrary, that the *in-situ* position is precisely that position in which the object NP would be in a declarative sentence.¹⁸

- (55) *ləleb kinab mac' duda
 know.PRS.PTCP.N which.N language.ABS 2SG:LOC
 ('What language do you know?')



The second argument against deriving the *in-situ* constructions by overt wh-extraction involves the differences in sensitivity to locality constraints between it and wh-ex situ which was introduced in §4.3.1.2. Kazenin (2002) observes that in Tsakhur (Tsezic), focus *in situ* does not obey locality constraints, which is why focusing *in situ* can occur inside islands.

- (57) rasul [fAt'imat_i-o-r a-r-InGal] ark'in
 Rasul Fatimat-be-F F-come-TEMP1 M.leave.PRF
 'FATIMAT having arrived, Rasul left.' [Tsakhur, Kazenin (2002: 301)]

To derive (57) on Jayaseelan's (2001) story, we would be forced to allow the wh-phrase to move out of islands, perhaps under very restricted circumstances.¹⁹

18. This is not strictly true, as we have already seen indirect object wh-questions where the indirect object precedes the subject, as per usual, but is itself preceded by the direct object which has scrambled to the left periphery. I will return to such sentences at the end of this chapter.

19. One way of doing so is by adopting Hagstrom's (1998) concept of *Q-migration*, whereby Q, the question particle, is able to contercyclically move to the edge of an island thus becoming

If that were the case, however, we would be expecting that overt extraction from the same adjunct island should also be permitted, a prediction that is not fulfilled. (58) illustrates.

- (58) *fAt'imat_i-o-r rasul [t_i a-r-InGal] ark'in
 Fatimat-be-F Rasul F-come-TEMP1 M.leave.PRF
 'After FATIMAT came, Rasul left.' [Tsakhur, Kazenin (2002: 301)]

The same test is applicable to Avar wh-questions, with exactly the same results: we have seen in §4.3.1.2 above that wh-phrases can appear inside strong islands but cannot be extracted from them overtly (the examples below are repeated for ease of reference).

- (59) a. mun roq'owe [š:iw w-ač'- a- rawgo] a- ra- w
 ISG.ABS home.M.LAT who.ABS M-come-PST-CVB go-PST.PTCP-M
 'I went home when who arrived?'
 b. *š:iw mun roq'owe [__ w-ač'- a- rawgo] a- ra- w
 who.ABS ISG.ABS home.M.LAT M-come-PST-CVB go-PST.PTCP-M
 ('*Who did I go home when arrived?')

Considering the data above, as well as even graver problems of the lack of reconstruction and crossover effects described earlier, we can conclude that an analysis whereby all wh-phrases, *in-* and *ex-situ* alike, are extracted from the base position, is untenable.

Let us take stock. By now we have the first half of the argument against wh-extraction being involved in constructing Avar wh-questions: empirical evidence presented in the last few sections compellingly argues against movement. The second half of the argument resides in mono- vs. biclausality of structures with extracted wh-phrases.

4.3.4 *Against a monoclausal analysis for wh-ex situ*

Recall that, as mentioned earlier, the two kinds of approach to \bar{A} -dependencies discussed in §4.2.2 yield different empirical predictions with respect to observed word order (i.e. for those languages whose word order is relatively free): the pseudoclefting approach assumes a biclausal structure with the embedded

accessible for extraction. Then one could try to pursue an obligatory wh-movement analysis of wh-in situ (cf. Yeo 2010 on optional wh-fronting in Japanese, Sinhala, Singapore English and Babine-Witsuwit'en). This possibility requires further investigation, but it looks at first blush that Q-migration is too permissive a concept, as there is still no way for us to tell what will block overt extraction purportedly implicated in the derivation of *ex-situ* structures.

clause demonstrating rigid constraints on word order (the case of Turkish and Ossetic), whereas *wh*-movement obtains in monoclausal environments and no rigidity of order is enforced (the case of Russian).

Similarly to Turkish, Avar is a discourse configurational language, and, as it has been emphasised already, the order of arguments and adjuncts is extremely flexible (60), but only so in root clauses — embedded sentences display fewer possible reorderings (61) with relative clauses being strictly verb-final (Testelec 1998a,b).

- (60) a. insu- ca mina b-ale- b b-ugo
 father-ERG house.ABS N-build.PRS.PTCP-N N-be.PRS
- b. mina insu- ca b-ale- b b-ugo
 house.ABS father-ERG N-build.PRS.PTCP-N N-be.PRS
- c. b-ale- b b-ugo mina insu- ca
 N-build.PRS.PTCP-N N-be.PRS house.ABS father-ERG
 ‘Father is building a house’

The ordering possibilities in (60) are only a subset of those possible: arguments can appear in any order either preceding the verb (or the V+Aux complex) or following it; most importantly, verb-initial orders in such declarative sentences are easily available. This situation is so far similar to that in Turkish and Ossetic.

Now, when it comes to relativisation, verb-initial orders in such constructions are ungrammatical, again as in Turkish and Ossetic.

- (61) a. narkotikal r- ičule- w či
 drugs.ABS PL-sell.PRS.PTCP-M man.ABS
- b. *r- ičule- w narkotikal či
 PL-sell.PRS.PTCP-M drugs man.ABS
 (‘drugs dealer’)

The same rigidity of order is characteristic of focus sentences and *wh*-questions (62), which reinforces the already observed similarity between the shape of their presuppositional part and that of canonical relatives.

- (62) *b-ičule- b š:ib hes
 N-sell.PRS.PTCP-N what he.ERG
 (‘What does he sell?’)

Moreover, the presuppositional part of a question/focus sentence can in certain cases be realised as a full-on relative clause headed by a semantically

bleached noun *žo* 'thing':²⁰

- (63) [due ługara- b žo] š:iib
 you:DAT happen.PST.PTCP-N thing.ABS what
 'What happened to you?' (lit.: 'What's the thing that happened to you?')

4.3.5 Summary

To sum up, it is undeniable that any monoclausal analysis which has the wh-phrase moving out of its base position seems problematic for several reasons.

Firstly, of all the (conclusive) diagnostics of movement-derived \bar{A} -dependencies, none have given us enough reason to suppose that wh-extraction has taken place: there are no Principle C effects that we might be expecting due to reconstruction (§4.3.1.3); there are also no crossover effects, either in questions and focus sentences or in relative clauses (§4.3.1.4). With *in-situ* wh-questions, moreover, we do not find any locality effects (§4.3.1.2), which suggests yet more strongly that an obligatory wh-extraction analysis is untenable.

Secondly, with both *ex-* and *in-situ* orders we find surprising restrictions on word order in that the normally admissible verb-initial structures suddenly become unacceptable — a natural consequence of a biclausal pseudocleft-like structure proposed for wh-dependencies in other languages.

Thirdly, we have seen evidence that the core of Avar wh-questions not only shows a certain resemblance to relative clauses but can even take the shape of a full-on headed relative clause, which is unexpected on a simple wh-movement analysis.

In the rest of the chapter I will propose an explicit analysis of the syntactic structure of *ex-* and *in-situ* wh-questions in Avar. I defer the discussion of the semantics of questions and focusing to the next chapter.

20. It is here that Adger & Ramchand's (2005) anti-identity effects mentioned on p. 122 can be argued to appear. The semantically bleached noun, *žo* 'thing', is a count noun capable of assuming plural inflection, *ž-al* (*<*žo*-al) 'thing.PL', and appearing as the absolutive-marked internal argument of transitive verbs:

- (i) duca r- icune- l řantal žal š:i- b
 2SG.ERG PL-say.PRS.PTCP-PL stupid.PL thing.PL what-N
 'What stupid things are you saying?' (Alekseev & Ataev 1997: 85)

What is peculiar about structures like (i) is the number mismatch between the wh-phrase in singular absolutive and the rest of the noun phrase it is supposed to have originated together with, which is plural, as evinced by the plural marking on (i) the NP and its modifier, and (ii) the verb. I take this behaviour as additional evidence that a base-generation account is better suited for Avar wh-questions.

4.4 A pure base-generation analysis is untenable

To derive a relative clause, then, we should have a syntactic way of constructing a predicate in the semantics. This is most easily done by establishing a syntactic dependency between the operator at the top and the variable at the foot of the dependency. One option, put forth by [Adger & Ramchand \(2005\)](#), would be to assume that phasal heads like C come equipped with an operator feature $[\Lambda]$ that the semantics interface interprets as a λ -abstract. In addition to the Λ -feature, [Adger & Ramchand](#) introduce a feature $[ID:]$ which stands for the position abstracted over — a variable. This $[ID:]$ feature can take at least two values, ϕ and dep . The ϕ value should not concern us here, as the lexical item specified as $[ID:dep]$ will correspond to a pronoun whose value is determined directly by the assignment function. The other value, however, is precisely the ingredient needed to ensure that the identification of the variable occurs via the assignment function that is itself determined by the syntactic operator bearing a Λ -feature.

$$(64) \quad [\Lambda \dots ID] \rightarrow \lambda x \dots x$$

Let us follow [Adger & Ramchand 2005](#) in assuming that Avar relative clauses involve predicate abstraction over a null pronoun, *pro*, that, due to its pronounness, bears a categorial D feature and an unvalued ID feature:

$$(65) \quad [D, ID:]$$

The relativising complementiser, in Avar realised as participial morphology on the verb, I take to bear an interpretable Λ -feature. As this λ -operator must semantically bind the right pronoun, the relativiser must also bear an interpretable $[ID:dep]$ feature, which will syntactically value the matching but unvalued ID-feature on *pro* thus creating the desired dependency. Finally, the relativising complementiser in Avar lacks an EPP-feature (unlike its counterpart in, say, English) triggering the movement of the head noun or that of the empty operator.

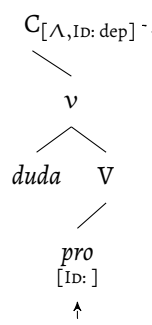
$$\begin{array}{lll}
 (66) \text{ a. } [C, \Lambda, ID:dep] \dots pro[D, ID:] & \text{(before feature valuation)} \\
 \text{ b. } [C, \Lambda, ID:dep] \dots pro[D, ID:dep] & \text{(after feature valuation)} \\
 \text{ c. } \lambda x \dots x & \text{(semantic interpretation)}
 \end{array}$$

Because we have discussed the derivation of Avar relative clauses in the previous chapter, I provide a diagram in (68) that represents the simplified derivation of the predicative core of the headless relative of our *ex-situ* example in

(67).²¹

- (67) kina- b mac' [duda pro ła- l- e- b]
 which-N language.ABS 2SG:LOC know-PRS-PTCP-N
 'What language do you know?'

(68)



It should be added that to allow, on Adger & Ramchand's (2005) assumptions, relative clauses bigger than a single phase to realise the question's presupposition, every phasal head must be specified with a matching but unvalued [ID:] feature, effectively deriving syntactic transparency when needed.

As far as semantic interpretation is concerned, so far relativisation has created an object that the interface will interpret as a property of type $\langle e, t \rangle$. It should be noted that λ -abstraction in Adger & Ramchand's (2005) system is completely independent of \bar{A} -movement, being instead encoded featurally by the Λ - and ID-features. Depending on one's analysis of headless relatives (which is not spelled out by Adger & Ramchand 2005) this $\langle e, t \rangle$ -type object can now either combine with a phonologically null head noun, also of type $\langle e, t \rangle$, via the commonly assumed rule of Predicate Conjunction/Predicate Modification (Heim & Kratzer 1998), or the relative CP can wait until the next step, when it is taken as the complement by a definite determiner (see below).²²

21. To save space, I have conflated all the functional heads in the projection line above *v* under the label *C* and only included the exponents of the arguments.

22. The Predicate Modification rule is, in essence, a conjunction operation on two or more predicate-denoting objects. Its definition is in (i) below.

(i) *Predicate Modification*

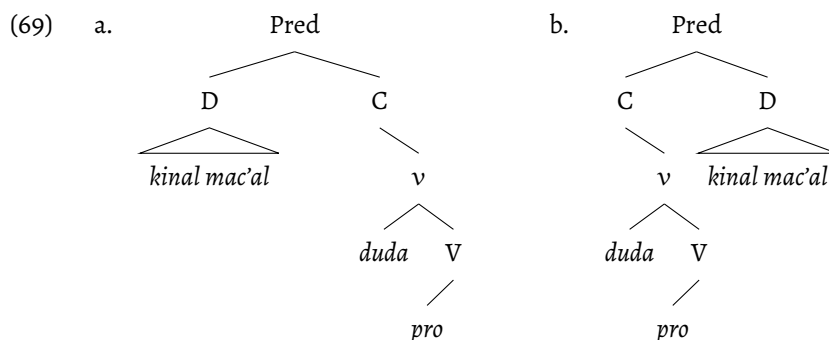
If α is a branching node and $\{\beta, \gamma\}$ is the set of α 's daughters, then α is in the domain of $\llbracket \cdot \rrbracket$ if both β and γ are, and $\llbracket \beta \rrbracket$ and $\llbracket \gamma \rrbracket$ are both in $D_{\langle e, t \rangle}$. In this case, $\llbracket \alpha \rrbracket = \lambda x \in D_e. \llbracket \beta \rrbracket(x) = \llbracket \gamma \rrbracket(x) = 1$. (Heim & Kratzer 1998: 83)

To use a concrete example, if *man* denotes a set of men, and *whom Mary saw* denotes a set of individuals seen by Mary, the two sets can be intersected, yielding a set of men seen by Mary.

If the head noun is null, we get the usual headless relative clause; otherwise the presupposition is spelled out as the full headed relative. To reiterate, Avar allows both options.

The next step is to create an object that the semantic component will be able to interpret as ranging over individuals, i.e. of type $\langle e \rangle$, as it is commonly assumed that headless relative clauses, also known as free relative clauses, denote a semantically maximal individual. The source of the maximality restriction is typically the same as with other nominals, viz. either a definite determiner, whether overt or not, or a type-shifting operation (see the influential Chierchia 1998 for a detailed discussion of maximality in nominals, and Rullmann 1995; Caponigro 2003 for a thorough overview of maximality in free relatives).

We can further follow Adger & Ramchand (2005), and eventually Adger (2011), and introduce a predication head Pred (Bowers 1993) that will connect the question's two parts — the wh-phrase and the relative clause. Another standard assumption made in theories invoking Pred is that it does not assign either a θ -role or Case to its complement (Rothstein 2004, Mikkelsen 2005). Regarding the choice of complement, there are two options: Pred first combines with the relative clause, creating the predicate (69a), or it is the wh-phrase which Pred takes as its complement (68b), and then the output of that step combines with Pred's remaining dependent.



Pred's left daughter in the trees above is the subject of the predication, whereas Pred, together with its right daughter, form the predicate. It should be kept in mind that the tree in (69a) will be linearised with the wh-phrase at the left edge, whereas the structure in (69b) will result in the reversed order. As has been shown in §4.2.1, both orders are attested.

Granting the differences in notation, the reader familiar with the literature on the clefting strategy of question-formation (Paul 2001, Potsdam 2006, 2009,

Potsdam & Polinsky 2011) will recognise the predicate-final structure in (69b) above, which gives us a way of deriving right-peripheral positions of *wh*-items, as the mirror image of that proposed in Potsdam 2006 for *wh*-questions in Malagasy, a predicate-initial Western Austronesian language of Madagascar.

Both structures above are equally compatible with the pseudoclefting analysis of focus in Nakh-Daghestanian proposed by Kazenin (2002), and also briefly sketched for Avar in Testelec 1998b, at least for the *ex-situ* cases.

Even though such an analysis could, in principle, derive some of the properties of Avar *wh*-questions we have seen in the first half of this chapter, it faces what look to me like insurmountable problems.^{23,24}

The first problem concerns a crucial difference between Scottish Gaelic, the language on whose basis Adger & Ramchand's (2005) analysis is developed, and Avar with respect to the case marking on the purported cleft's pivot (since clefts are, by hypothesis, copular constructions). In Scottish Gaelic the *wh*-phrase in the pivot position appears in the nominative case as opposed to carrying the case marker assigned to the gap in the base position.

- (70) a. Bha thu a'geàrradh na craoibhe [Scottish Gaelic]
 be.PST 2SG cutting the tree.GEN
 'You were cutting the tree.'
- b. *Dè na craoibhe a bha thu a'geàrradh
 which the tree.GEN C.REL be.PST 2SG cutting
- c. Dè a' chraobh a bha thu a'geàrradh
 which the tree.NOM C.REL be.PST 2SG cutting
 'Which tree were you cutting?' (Adger & Ramchand 2005: 169)

When looking at the case marking on Avar *wh*-phrases, however, it becomes obvious that the absolutive case is not the default case in which the *wh*-phrase must appear (which, as the reader will recall from the discussion in §2.2.4.2, it typically is in copular clauses) and the case marker carried by the *wh*-element is the same one as the noun phrase would receive in its argument position. Put

23. I am excluding from the present discussion a surmountable difficulty related to Adger & Ramchand's (2005) reliance on the existence of a null copula in Scottish Gaelic in addition to overt copulae which are obligatory in identificational and predicational clauses. This point extends to Avar as well.

24. Parasitic gaps, employed by Adger & Ramchand (2005) as a diagnostic of \bar{A} -movement, cannot be used to diagnose \bar{A} -movement in Avar for the same reason as Control structures could not be used, in §2.3.1, to unambiguously identify the external argument as the subject: since Avar is a *pro*-drop language, what looks like a parasitic gap could just as well be interpreted as an instance of *pro*-drop — a separate process with conditions and restrictions of its own.

differently, Avar wh-questions display case connectivity, as shown in (71).

- (71) a. ζ ali-ca jacał- e mašina b-ič- ana
 Ali- ERG sister.OBL-DAT car.ABS N-sell-PST
 'Ali has sold the car to his sister.'
- b. *š:i- j ζ ali-ca mašina b-ič- a- ra- b
 who.ABS-F Ali- ERG car.ABS N-sell-PST-PTCP-N
- c. li- e ζ ali-ca mašina b-ič- a- ra- b
 who-DAT Ali- ERG car.ABS N-sell-PST-PTCP-N
 'Who has Ali sold the car to?'

The declarative sentence in (71a) demonstrates that the addressee argument of a ditransitive verb in Avar typically carries a dative case marker. This case marker appears on the fronted wh-phrase *lie* 'who.DAT' in (71c). Crucially, the wh-phrase in (71b) may not appear in the absolutive case, unlike in the Scottish Gaelic example (70c) where the nominative case was obligatory.

In a similar vein, agreement in wh-questions where the absolutive-marked internal argument is questioned displays connectivity, agreement in Avar being tightly linked with case marking.

- (72) a. š:i**b** ζ ali-ca — b-ič- a- ra- b
 what.ABS Ali- ERG — N-sell-PST-PTCP-N
- b. *š:i**b** ζ ali-ca — r- ič- a- ra- l
 what.ABS Ali- ERG — PL-sell-PST-PTCP-PL
 'What has Ali sold?'

To elucidate, the two sentences in (72) differ with respect to the agreement marker on the verb: whereas (72a), which involves matching noun class features on the wh-phrase *š:i**b*** 'what' and the gap triggering agreement, is acceptable, (72b) is not, as the ϕ -features on the wh-phrase and the gap do not match. This agreement pattern, although completely normal, is problematic for pure base-generation analyses because it entails that an element in the gap position must carry precisely those ϕ -features which appear on the *ex-situ* interrogative expression.²⁵

25. In her analysis of cleft-like interrogative utterances Frascarelli (2010) claims that feature matching on the cleft's pivot and the gap inside the relative clause could be the result of an application of the Agree operation. Assuming, however, that Agree is constrained by a locality mechanism such as the Phase Impenetrability Condition (Chomsky 2001, 2008), and complex noun phrases contain a phase boundary, the plausibility of Agree crossing this boundary is difficult to envisage as this would violate the PIC. I therefore make the preliminary conclusion that either a different mechanism is required of ensuring that the relevant features appear on

The second point of difference between Avar and Scottish Gaelic wh-dependencies pertains to the (un)availability of multiple wh-questions. Adger & Ramchand (2005) use this phenomenon to rule out the competing analysis whereby the relative clause corresponding to the question's presupposition is derived via null operator movement instead of being created via base generation coupled with the feature-checking processes described above.

In particular, Adger & Ramchand (2005) contrast clefted multiple wh-questions in English such as (73a), which allow pair-list answers, with their structural counterparts like (73b) in Scottish Gaelic, which not only disallow such answers but cannot be asked at all.

- (73) a. Who was it that kissed who?
 b. *Cò a bha a'pògadh cò [Scottish Gaelic]
 who C.REL be.PST kissing who
 ('Who was it that kissed who?') (Adger & Ramchand 2005: 183)

Adger & Ramchand (2005) follow Higginbotham & May (1981) and analyse pair-list readings as arising from an absorption operation that obtains after the object wh-phrase has raised, covertly, to the specifier of the embedded *that*-clause, putting itself close enough to the subject wh-phrase for the absorption operation to go through. Since in Gaelic the object wh-phrase *cò* 'who' will remain *in situ* and therefore too far away from the subject wh-phrase, preventing absorption from happening, multiple wh-questions in Gaelic cannot be interpreted.

On the empirical side, Avar patterns with English in allowing both multiple wh-questions and pair-list answers to those questions. Consider (74), the context fashioned after Gribanova (2009: 140):

- (74) *Context:* We are in the dining room where there are several dishes on the table: the cured meat soup, the dumplings and the halawa. There are also three guests at the table. What I want to know is:
 kinaw hobol-as kinab kwen kw-a- ra- b
 which.M guest-ERG which.N dish.ABS eat-PST-PTCP-N
 'Which guest had which dish?'

The context brings pairs of guests and dishes to the fore, making (75) the most appropriate answer.

the pivot, or that case and agreement are regulated by different mechanisms than commonly assumed.

- (75) $\text{\text{ʕalica}} \quad \text{\text{ba}\text{χ}u\text{χ}} \quad \text{\text{kwana}}, \text{\text{sa}\text{ʕidica}} \quad \text{\text{χink'al}} \quad \text{\text{kwana}} \quad \text{\text{wa}}$
 Ali.ERG halawa.ABS eat.PST Saeed.ERG dumplings.ABS eat.PST CNJ
 $\text{\text{ʕumarica}} \quad \text{\text{holodul}} \quad \text{\text{karš:}} \quad \text{\text{kwana}}$
 Omar.ERG salt.meat.GEN soup.ABS eat.PST
 ‘Ali had halawa, Saeed had dumplings and Omar had the soup.’

One can conclude that a pure base-generation analysis of Avar wh-questions such as the one put forth by Adger & Ramchand (2005) captures a subset of properties associated with Avar wh-questions. First, it can account for the apparent biclausality of the construction: because relative clauses are a constitutive part of pseudoclefts, the fact that the verb in a wh-question appears in the same participial form as in relative clauses follows naturally. In a similar vein, the rigidity of order in wh-questions and relative clauses is consistent with Adger & Ramchand’s (2005) approach. Island sensitivity and the lack of reconstruction and crossover effects in *ex-situ* environments, too, are naturally accounted for if the wh-phrase is externally merged as the pseudocleft’s pivot. However, additional machinery is required to explain both the presence of morphosyntactic identity effects (case and agreement marking) and the availability of pair-list answers to multiple wh-questions. I show in the next section that a cleft-like analysis is nevertheless preferable to a direct \bar{A} -extraction approach and propose modifications that arguably resolve the morphosyntactic issues noted above.

4.5 Proposal

I have argued in the preceding section that Avar wh-dependencies possess a set of properties that are too contradictory to warrant a pure movement or base-generation analysis. On the one hand, we have evidence from reconstruction and crossover effects signalling a lack of a direct dependency between the *ex-situ* wh-phrase and the gap. In the present section I capture this observation by proposing a cleft-like, predication structure in which the *ex-situ* interrogative expression is one of the dependents of a predication element Pred (Bowers 1993, Mikkelsen 2005), and is thus connected with the gap only indirectly.

Island effects, on the other hand, I view as evidence of \bar{A} -movement, which leads to the derivation of a relative clause, and the element undergoing \bar{A} -movement is a null operator familiar from §3.3.4 above. The relative clause is Pred’s other dependent, and the entire structure is therefore akin to the structure of a pseudocleft.

I begin this section by sketching the general approach to the syntax and semantics of questions, proceeding next to presenting the structures underlying the derivation of *in-* and *ex-situ* orders.

4.5.1 Syntax and semantics of questions: the ingredients

For the purposes of this study I adopt the Hamblin/Karttunen approach to the syntax and semantics of questions (Hamblin 1973, Karttunen 1977), whereby the meaning of a question is the set of propositions corresponding to its answers (possible answers for Hamblin and true answers for Karttunen).²⁶

- (76) a. $\llbracket \text{Who left} \rrbracket = \lambda p_{\langle s, t \rangle}. \exists x [p = x \text{ left in } w_0 \wedge x \in \text{human}]$
 b. Domain of possible leftees: {George, Edmund}
 c. { George left, Edmund left }

I further follow Rooth (1985, 1992) and assume that linguistic expressions can have, at the level of semantic interpretation, two semantic values: an *ordinary semantic value* $\llbracket \cdot \rrbracket^o$ and a *focus semantic value* $\llbracket \cdot \rrbracket^f$. The focus semantic value of a linguistic expression, according to Rooth (1992), is a (contextually relevant) set of alternatives of the same type. The focus semantic value of an expression depends on whether that expression is itself being focused: if the expression is not focused, its focus semantic value corresponds to a singleton set containing its ordinary semantic value; should the expression carry focus marking, its focus value is treated as the set of contextually suitable alternatives.

Let us consider a simplified semantic interpretation of *Who left?*, glossing over most of the syntactic categories in both *who* and *left*, and making a reasonably plausible stipulation that *who* is focus-marked; the predicate, however, is not focus-marked. To compute the semantic value of the entire question, the predicate must apply, point-wise, to every member of the alternative set, which in our example is restricted to two individuals, George and Edmund, and yield a set of alternative propositions.

- (77) a. $\llbracket \text{who} \rrbracket^o = \text{tba}$
 $\llbracket \text{who} \rrbracket^f = \{x: x \in \{\text{George, Edmund}\}\}$
 b. $\llbracket \text{left} \rrbracket^o = \lambda x. x \text{ left}$
 $\llbracket \text{left} \rrbracket^f = \{\lambda x. x \text{ left}\}$
 c. $\llbracket \text{Who left} \rrbracket = \{x \text{ left}: x \in \{\text{George, Edmund}\}\}$

26. See Cross & Roelofsen (2014) for an accessible overview of approaches to the semantics of questions.

Because the context in which *Who left?* is uttered contains just two individuals, *George* and *Edmund*, the focus semantic value of *who* is a two-element set containing *George* and *Edmund* (77a). The focus semantic value of *left* is a singleton set containing *left*'s ordinary semantic value (77b). Finally, when the result of the merge operation combining *who* with *left* is interpreted, as in (77c), the only semantic value that can be calculated is the focus semantic value, which in this instance is a set containing two alternative propositions. The meaning of *Who left?* is therefore, that either *George* left or *Edmund* left.

To avoid confusion, a remark is in order concerning the interaction of the two types of semantic value. One of the novel aspects of Rooth's (1985) system was the proposal that the computation of the ordinary and focus semantic values proceeds in parallel, thus making it impossible for them to interact: ordinary semantic values only combine with ordinary semantic values, and similarly, focus semantic values combine with focus semantic values.²⁷

For the purposes of this chapter I adopt Beck's (2006) modification of the Hamblin/Karttunen semantics to the extent of analysing wh-phrases as only having a focus semantic value and leaving their ordinary value undefined. This entails that the ordinary semantic value of every node dominating the wh-phrase will be undefined. In order to be able to return to the question's ordinary semantic value, a question operator is required, which I identify with Cable's (2010b) Q-particle.²⁸

4.5.2 Avar constituent interrogatives

As a preliminary to the presentation of the analysis, I would like to refine the semantic values of the wh-expressions with a view to capturing the fact that the lexical item *š:i-CM* can mean both 'who' and 'what' (78c), depending on the noun class marker, as well as 'what items' and 'what individuals', since it can also take the plural inflection (78d), with a further subdivision of *who* into masculine and feminine (78a–b).

- (78) a. *š:i-w* 'who-M'
 b. *š:i-j* 'who-F'
 c. *š:i-b* 'what-N'
 d. *š:a-l* 'who/what-PL'

27. I am grateful to Jakub Dotlačil (p.c.) for bringing this to my attention.

28. To my knowledge, the idea of an abstract question-creating element Q goes at least as far back as C. L. Baker 1970.

The semantic values for the interrogative expressions above are as in (79); because the ordinary semantic value of *wh*-elements is by hypothesis undefined, I only give the focus semantic values (at present we are to think of the restrictors in (79) in a pre-theoretic way).

- (79) a. $\llbracket \check{s}:iw \rrbracket^f = \{x: x \in \text{male}\}$
 b. $\llbracket \check{s}:ij \rrbracket^f = \{x: x \in \text{female}\}$
 c. $\llbracket \check{s}:ib \rrbracket^f = \{x: x \in \text{non-human}\}$
 d. $\llbracket \check{s}:al \rrbracket^f = \{x: x \in \text{group}\}$

The meaning of $\check{s}:iw$ ‘who.M’ is thus a (contextually restricted) set of male individuals (similarly for $\check{s}:ij$ ‘who.F’ and $\check{s}:ib$ ‘what’), whereas $\check{s}:al$ is a set of pluralities (79a–d).

Let us proceed now to the derivation of the *ex*- and *in-situ* types of matrix constituent interrogatives described in §4.2.1 above. I will argue that in both *ex*- and *in-situ* environments a truncated pseudocleft is projected, the difference between the orders arising because of a different partitioning of the pseudocleft into the “subject” and “predicate”. We begin by considering those sentences where the *wh*-phrase appears outside of its thematic position.

4.5.2.1 Wh-ex situ

The first part of the analysis is as follows. I claim that *wh*-questions with *ex-situ* question words have the structure of a reduced pseudocleft built on the basis of a relative clause expressing the question’s presupposition.²⁹ Besides the relative clause, the pseudocleft’s other key element is the *wh*-phrase, which is connected with the relative clause by means of a functional element *Pred* effecting predication. Consequently, there is no direct dependency between the *wh*-phrase and the gap inside the relative clause, and the lack of reconstruction effects is expected.

As we have seen in §4.4 during the discussion of Adger & Ramchand’s (2005) clefting analysis of *wh*-questions in Scottish Gaelic, the pseudocleft-internal relative clause can either be taken to occupy the subject position of the pseudocleft with the *wh*-phrase serving as the pseudocleft’s predicate, or the other way round. This treatment follows, to a certain extent, some earlier work on Northeast Caucasian, such as Kazenin (2002). Unlike under Kazenin’s (2002) proposal, however, the composition of these two parts of the pseudocleft — the *wh*-element and the relative clause — will be mediated by a

29. The pseudocleft is “reduced” in the sense that it has the structure of a *PredP* thus lacking the higher layers of functional structure.

phonologically empty head Pred that is responsible for forming the predicative core of a sentence.

As the literature on the syntax and semantics of predication is typically silent regarding the interaction of predication with association with focus, I introduce a modification to what is otherwise a standard analysis of Pred with the goal of capturing an areal feature of the Northeast Caucasian languages, viz. the use of copula/auxiliary float to convey various information-structural shifts in the meaning of a sentence.

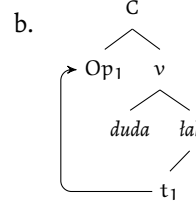
Building on the existing analyses of the predication core of copular clauses (Bowers 1993, Adger & Ramchand 2003, and especially Mikkelsen 2005), I treat the predicator as a function which takes an intensionalised predicate and an individual as its two arguments and yields a proposition in which the predicate applies to the individual (see below for details). Because PredP, at least in questions, is bound to end up lacking an ordinary semantic value at the level of interpretation, a further element is required, which I identify with the Q-particle (Hagstrom 1998, 2000; Cable 2010b,a). The Q-particle operates on the focus semantic value of its PredP complement and turns it into an ordinary semantic value.

To consider a concrete case, recall our *ex-situ* example (52a), repeated as (80) below. The interpretation of this question that we are after is the same one as that of its English counterpart — the ordinary semantic value of (80) must correspond to a set of propositions of the form *You know* $x \in \text{language}$ — but the ingredients and the manner in which they are put together are distinct from the corresponding question in English.

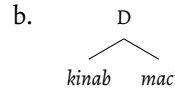
- (80) kina- b mac' duda ła- l- e- b
 which-N language.ABS 2SG:LOC know-PRS-PTCP-N
 ‘What language do you know?’

The structure underlying the derivation of the order in (80), built from the numeration in (83), can be represented as (84). In line with the analysis sketched in §3.3 of the preceding chapter, both the relative clause and the complex wh-phrase are created from separate numerations in distinct subderivations (cf. (81) and (82) for the simplified numeration and derivation of the relative clause and the complex wh-phrase respectively).

(81) a. $N_1 = \{C, Op_1, v, \textit{duda}, \textit{lal}\}$

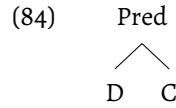


(82) a. $N_2 = \{\textit{kinab}, \textit{mac'}, D\}$



(83) $N_3 = \{D, C, \textit{Pred}\}$

Since both of *Pred*'s dependents have, by hypothesis, been created in distinct derivational layers, *Pred* combines them blindly, as it were, without being able to see their internal structure.



Turning to the semantic interpretation, we already have the first ingredient to the semantic part of our proposal, viz. the denotation of the *wh*-expression *kinab mac'* 'what language':

(85) **The semantics of *wh*-elements**
 $\llbracket \textit{kinab mac'} \rrbracket^o$ is undefined
 $\llbracket \textit{kinab mac'} \rrbracket^f = \{x_e : x \in \text{language}\}$

Nevertheless, in order to create the predicate *Pred* needs to combine with a relative clause, which results, as suggested in §3.3.4, from λ -abstraction over an individual variable on the basis of a tensed clause. The λ -abstraction operation is the consequence of the (null) operator moving within a derivational layer:

(86) **The semantics of relative clauses**
 $\llbracket \textit{duda} \text{ __ } \textit{laleb} \rrbracket^o = \lambda y. \lambda s. \text{you know } y \text{ in } s.$

The gap in (86) corresponds to the direct object, making the entire relative clause an instance of object relativisation. The predictor, whose semantic value is given in (87), combines with a property (type $\langle e, st \rangle$) and an individual; this lexical entry is adopted from Mikkelsen (2005: 188). Because the denotation of the relative clause is in the domain of the function denoted by *Pred*,

the two dependents can combine by the usual composition rule of Function Application. Furthermore, due to the absence, at this particular stage, of any focus-marked subconstituent, no reference to focus semantic values need be made. This is all illustrated in (88) below.

(87) **The semantics of the predictor**

$$\llbracket \text{Pred} \rrbracket^o = \lambda P_{\langle e, st \rangle}. \lambda x. \lambda s. P(x) = 1 \text{ in } s.$$

The object labelled $\overline{\text{Pred}}$ in (88a) is the output of the merge operation applying to Pred and $\text{CP}_{[\text{REL}]}$, whereas (88b) represents the computation of the semantic value for the whole PredP .

$$\begin{aligned} (88) \quad a. \quad & \llbracket \overline{\text{Pred}} \rrbracket^o = \llbracket \text{Pred} \rrbracket^o (\llbracket \text{CP} \rrbracket^o) \\ & = \lambda P_{\langle e, st \rangle}. [\lambda x. \lambda s. P(x) = 1 \text{ in } s] (\lambda y. \lambda s. \text{you know } y \text{ in } s) \\ & = \lambda x. \lambda s. \text{you know } x \text{ in } s = 1 \text{ in } s. \\ b. \quad & \llbracket \text{PredP} \rrbracket^o \text{ is undefined} \\ & \llbracket \text{PredP} \rrbracket^f = \llbracket \overline{\text{Pred}} \rrbracket^f (\llbracket \text{DP} \rrbracket^f) \\ & = \lambda x. [\lambda s. \text{you know } x \text{ in } s] (\{y_e: y \in \text{language}\}) \\ & = \{\lambda s. \text{you know } y \text{ in } s: y \in \text{language}\} \end{aligned}$$

The ordinary semantic value of the predicate (88a) is the same one as that of the relative clause, i.e. a set of objects known by the addressee.

The undefinedness of PredP 's ordinary semantic value is inherited from the wh-phrase, which we are treating as only having a focus semantic value. It can be seen from my use of the set-notation in (88b) that PredP still has no ordinary semantic value, its focus semantic value being calculated by applying the predicate to the wh-argument in a point-wise manner.

The final step is to merge the truncated pseudocleft with the Q-morpheme, which will ensure, at the moment of interpretation, that the focus semantic value of the topmost node will be transformed into a required ordinary value:

$$(89) \quad \llbracket Q \text{ kinab mac' duda laleb} \rrbracket^o = \{\lambda s. \text{you know } y \text{ in } s: y \in \text{language}\}$$

It is only natural to pose the question to what extent the proposed analysis is compatible with such properties of questions containing *ex-situ* interrogative expressions as the lack of reconstruction and crossover effects, a morphosyntactic similarity to relative clauses, and sensitivity to islands.

Firstly, the obligatory participial morphology on the verb follows from the biclausal nature of the hypothesised structure: because one of Pred 's arguments is a relative clause, the presence of those affixes which are normally seen in the context of relativisation receives the simplest account possible. Related to this is the prohibition on verb-initial orders in both questions and

relative clauses: because questions have relative clauses as their integral part, they automatically share the restrictions on relativisation.

Secondly, the lack of reconstruction and crossover effects can, as in [Adger & Ramchand's \(2005\)](#) analysis, be accounted for by placing the *wh*-phrase's generation site in a distinct derivational layer with respect to the operator-variable dependency. I leave the exact elaboration of this part of the proposal to future work.

Thirdly, island sensitivity and clause-boundedness follow from derivation layering as outlined in the previous chapter: since long-distance relativisation is prohibited for most types of embedded clauses, a corresponding pseudocleft cannot be formed.

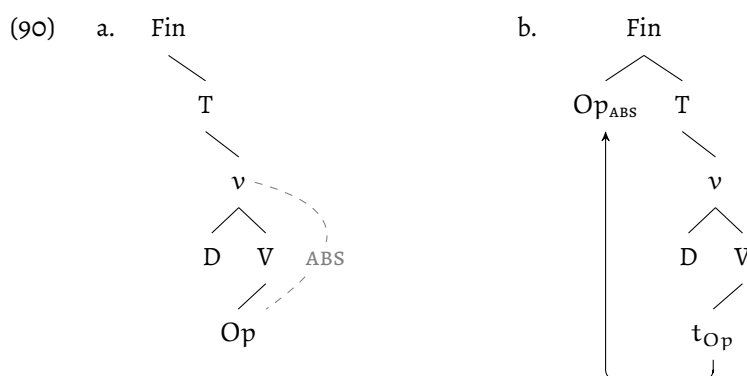
Two more characteristics require more effort to be accommodated in the present system: these are case and agreement connectivity on the one hand, and the availability of multiple *wh*-questions on the other. Both are *prima facie* problematic, primarily because morphosyntactic connectivity effects fit more naturally with \bar{A} -movement analyses, and because the availability of multiple *wh*-questions goes against the typological generalisation regarding the distribution of strategies of question formation (*wh*-movement, focus-movement, *in situ* and clefting), according to which languages employing clefting as a question strategy typically disallow multiple *wh*-questions. And whereas I discuss the morphosyntactic side of connectivity effects immediately below, I prefer to postpone the discussion of multiple *wh*-questions until the next subsection.

The key factor allowing the current analysis to accommodate case and agreement connectivity is the inability of Pred to assign Case and θ -roles to its dependents, leaving either one or both of them without Case or θ -role ([Mikkelsen 2005](#), [Rothstein 2004](#)). The empty operator inside the relative clause, however, does receive both Case and a θ -role in the customary manner, which in ergative languages normally means internally to the *vP* ([Woolford 2006](#), [Legate 2008](#)). The structure below repeats the derivation of the relative clause portion but this time also conveys the relevant information regarding case assignment whilst ignoring all case-related marking on those nominals that have little to do with the connectivity effects under consideration. We continue using our *What language do you know?* example.³⁰

The relative clause instantiates, as was mentioned above, object relativ-

30. The present analysis seems to be compatible both with the feature-valuation accounts of Case assignment ([Pesetsky & Torrego 2011](#)), as well as those that view Case as a reflex of the syntactic dependency between two elements ([Zwart 2006](#)). I only adopt [Zwart's \(2006\)](#) version to minimise the number of subscripts notating feature valuation. As far as I can tell, nothing hangs on this.

isation, and direct objects typically appear in the unmarked ABS-case. Even though the case marking on the wh-phrase in *Kinab mac' duda taleb?* is absolutive, in this instance we are dealing with an example of case connectivity rather than the absolutive case that is assigned, by default, to the elements flanking the copula in copular constructions.³¹



As can be seen from the two steps illustrated in (90), after the null operator in the position of the internal argument has received its absolutive case (90a), it can undergo internal merge targeting the root of the tree (90b). Notably, in doing so it keeps its newly acquired absolutive property.³²

I believe it is worth drawing a parallel between the solution to the case connectivity problem presented below and the analysis of case-marking patterns in relativisation environments under the head-raising analysis. An objection frequently raised against various implementations of the head-raising analysis of relativisation concerns the fact that the purportedly moved head noun is predicted to be able to be marked for Case several times. It first receives case from a case assigner inside the relative clause. It then moves out of the relative clause and is case-marked from a higher clause. Because the exact manner in which variants of the head-raising analysis solve this problem is immaterial, I only provide an illustration of the issue itself (cf. [Salzmann 2006](#) for a useful discussion).

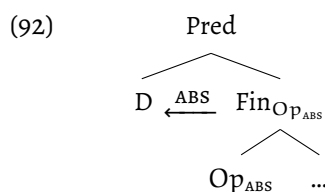
31. Case connectivity extends to DPs in cases other than the absolutive — the reader may recall our earlier example (71) on p. 145 above.

32. The account of case connectivity that follows next is reminiscent of the mechanisms proposed to handle Case-related issues in the head-raising analysis of relativisation ([Kayne 1994](#), [Bianchi 2000](#), [de Vries 2002](#) etc.).

- (91) Ja kupil knigu, kotoraja — tol'ko vyšla [Russian]
 I bought book.ACC which.F:NOM just exit.PST
 'I have bought a book that has just appeared.'

In the Russian sentence above the gap inside the relative clause is a copy of the head noun *kniga* 'book', and it is inside the relative clause that it gets NOM. It then moves out of the relative clause and, being the internal argument of the matrix verb, receives ACC inside the matrix vP.

It is my opinion that a similar mechanism can be used to account for morphosyntactic connectivity effects in Avar PredPs. If Pred is the head that is unable to assign Case to the specifier (Rothstein 2004, Mikkelsen 2005), its specifier remains without any Case marking at all. Returning to our structure in (90), once a syntactic dependency has been established between the subject of the predication and the rest of it, the absolutive property of the null operator can be inherited by the subject wh-phrase under predication (Zwart 2006). This is depicted in (92), and works in an identical manner for all the other morphological cases:^{33,34}



Rounding up our discussion of questions with left- and right-extraposed wh-phrases, I present a brief summary of the dependencies and relations involved in their formation. The key feature of the approach advocated here is that the gap is never in a direct relation with either the wh-phrase or the Q-element. Rather, the gap is \bar{A} -related to a non-interrogative relative complementiser responsible for contributing a λ -abstraction operation to the meaning of the clause. The relation between the resulting relative clause and the wh-phrase is that of predication mediated by a phonologically null Pred head. As far as semantic interpretation is concerned, the following needs to be reiterated:

33. The mechanism proposed here differs from Zwart's (2006) analysis in that feature transmission under merge can proceed in either direction. Under Zwart's approach it is the predicate that can inherit (morphosyntactic) features from the subject but not the other way around.

34. Note a crucial link between the status of an Avar wh-question as a PredP and the case-transmission mechanism described in the main text. Because clefts in other languages can project further functional structure above Pred, such as T, case-assignment works in the usual way (i.e. the subject of a copular construction receives NOM from T).

wh-items are analysed as only having a focus semantic value within the framework of Alternative semantics, and must cooccur with a dedicated Q-element in order for the linguistic expression to be interpretable.

4.5.2.2 Wh-in situ

Having concluded that *ex-situ* versions of wh-questions in Avar are a subset of the pseudocleft construction, let us turn our attention to their *in-situ* counterparts. We have seen from the exposition in §4.3.3 that wh-phrases that appear *in situ* could not have undergone overt wh-movement, with that movement being masked by other constituents moving across the wh-phrase. Furthermore, we have observed, in §4.3.1.3, a contrast with respect to Principle C effects in reconstruction environments between the *ex-* and *in-situ* variants of wh-questions: only in the *ex-situ* cases can Principle C be lifted.

I therefore pursue a parallel analysis to the one presented in the preceding section and propose that Avar questions with *in-situ* wh-phrases again correspond to a reduced pseudocleft. In a sentence like (93), repeated from (52b) above, the wh-phrase is both generated and pronounced in exactly one and the same position — the position of the direct object inside the relative clause. Just like on the *ex-situ* scenario, the elements forming the pseudocleft are related via a Pred head.

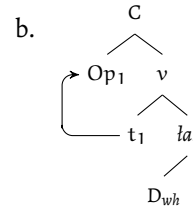
- (93) *duda kina- b mac' la- l- e- b*
 2SG:LOC which-N language.ABS know-PRS-PTCP-N
 'What language do you know?'

The numeration and syntactic representation of (93), given as (96) and (97) respectively, is parallel to the *ex-situ* cases, only the predication's "subject" is realised as *duda* '2SG:LOC', whereas the wh-element appears inside the relative clause.

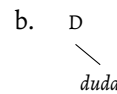
The numeration is identical to the one we have utilised in (83) above, and its composition is preceded by the two subderivations running their course: one subderivation results in a relative clause (94), whereas the other creates the subject of the predication, *duda* '2SG:LOC' (95).³⁵

35. At least on the approach to pronominal syntax and semantics that treats them as complex expressions such as definite descriptions (Elbourne 2005, 2008, 2013).

(94) a. $N_1 = \{C, Op_1, D_{wh}, v, lal\}$



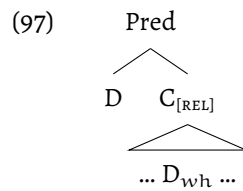
(95) a. $N_2 = \{D, duda\}$



Just like in the *ex-situ* example we have seen above, the outputs of the subderivations above — the subject of the predication *duda* ‘2SG:LOC’ and the participial relative clause *kinab mac’ laleb* ‘knowing what language’ — enter the numeration in (96) as atomic objects D and C with their internal structure invisible in the current derivational layer, or at least none that is visible to the narrow syntax.

(96) $N_3 = \{D, C, Pred\}$

The elements of N_3 in (96) will combine in an unrestricted order, yielding as one of the outputs the structure in (97), where Pred takes as its complement the relative clause containing a wh-phrase in the direct object position. It then merges with the LOC-marked subject DP.



One of the consequences of positing such a structure with the wh-item inside the relative clause is the fact that the proposed structure aligns nicely with the observation, discussed earlier in §4.3.3, that in *in-situ* orders the interrogative expressions can appear inside islands. The *ex-situ* cases, in contrast, have been shown to be sensitive to locality constraints.

The relative clause in (97) differs from its counterpart in (68) in involving λ -abstraction over the subject, whereas (68) was an example of object relativisation.

Turning to semantic interpretation, it proceeds as outlined below (I am

glossing over the exact details of how null operator movement effectively creating a λ -abstract out of a clause interacts with the focus semantic value of the clause in question). Because the relative clause contains a *wh*-expression as one of its subconstituents, its ordinary semantic value is undefined, just like that of the *wh*-phrase itself. What this amounts to saying is that even though one of the semantic values is undefined, both structure building and semantic interpretation can proceed unimpeded, which is a natural consequence of a modular approach as envisaged here.³⁶ Indeed, null operator movement is an instance of merge, which applies freely, and the requirement that linguistic objects should have ordinary semantic values will only apply at the root level once all the syntactic composition has been done.³⁷

(98) **The semantics of *wh*-item containing relative clauses**

$\llbracket __ \text{kinab mac' laleb} \rrbracket^o$ is undefined

$\llbracket __ \text{kinab mac' laleb} \rrbracket^f = \{\lambda z. \lambda s. z \text{ knows } y \text{ in } s: y \in \text{language}\}$

The focus semantic value of the relative clause containing the *wh*-phrase *kinab mac'* 'what language' in (98) is a set of alternative properties of knowing a lan-

36. Pace the so-called 'crash-proof' approaches, cf. Putnam (2010) for a collection of papers contrasting 'crash-proof' approaches with 'free-merge' analyses.

37. As far as operational timing is concerned, it only seems logical that the computation of the focus semantic value should precede null operator movement, and hence also λ -abstraction. Put differently, at the point that null operator movement is interpreted as λ -abstraction in the only computable semantic values of the entire object at hand are focus semantic values, which presents a challenge for the application of traditional interpretational procedures. Nevertheless, the literature on focus and Hamblin semantics provides several revisions of the standard Predicate Abstraction rule (Heim & Kratzer 1998), such as the two presented below.

(i) **Pointwise/Flexible Predicate Abstraction**

If α is a branching node and $\{\beta, \gamma\}$ the set of its daughters, with β a numerical index. Then the denotation of α follows from (a) or (b), whichever one is defined.

a. If $\llbracket \gamma \rrbracket \in D_{\langle \tau \rangle}$, then for any arbitrary assignment g : $\llbracket \alpha \rrbracket^g = \lambda x. \llbracket \gamma \rrbracket^{[x/i]} \in D_{\langle e, \tau \rangle}$.

b. If $\llbracket \gamma \rrbracket \in D_{\langle \tau, t \rangle}$, where τ is a complex type, then for any arbitrary assignment g : $\llbracket \alpha \rrbracket^g = \lambda x. \llbracket \gamma \rrbracket^{[x/i]} \in D_{\langle \langle e, \tau \rangle, t \rangle}$. (Assmann & Heck 2013)

A potential alternative is Kratzer & Shimoyama's (2002) version of the *Predicate Abstraction* rule, presented below for the sake of concreteness, despite the authors' own dissatisfaction with the definition.

(ii) If α is a branching node whose daughters are an index i and β , where $\llbracket \beta \rrbracket^{w,g} \subseteq D_{\langle \sigma \rangle}$, then $\llbracket \alpha \rrbracket^{w,g} = \{f: f \in D_{\langle e, \sigma \rangle} \wedge \forall a. f(a) \in \llbracket \beta \rrbracket^{w,g[a/i]}\}$.

To the extent that this is a real problem, it seems to me that Kotek (2014) faces it as well, at least when it comes to the derivation of questions with islands (Kotek 2014: 227). The various problems are discussed in Shan (2004) and Novel & Romero (2010).

guage.

Just as before, as far as the derivational history of *kinab mac'* is concerned, the most consistent state of affairs is for the entire wh-phrase to be the output of a separate derivational layer.

$$\begin{aligned}
 (99) \quad \llbracket \overline{\text{Pred}} \rrbracket^o & \text{ is undefined} \\
 \llbracket \overline{\text{Pred}} \rrbracket^f & = \lambda P_{\langle e, st \rangle} \cdot [\lambda x. \lambda s. P(x)(s)] \\
 & \quad (\{\lambda z. \lambda s. z \text{ knows } y \text{ in } s: y \in \text{language}\}) \\
 & = \{\lambda x. \lambda s. x \text{ knows } y \text{ in } s: y \in \text{language}\}
 \end{aligned}$$

Because the subject of the predication contains no focus-marked expressions, nothing stops it having the usual two values, i.e. both the ordinary and focus semantic values. These are specified in (100), where I leave it up to the reader to fill in what they find to be the most correct analysis of indexicality. It is my impression that nothing hinges on this, since the only difference between the ordinary and focus semantic values will be that the focus semantic value is represented as a set whose single member is the ordinary semantic value.

$$\begin{aligned}
 (100) \quad \llbracket \text{duda} \rrbracket^o & = \iota z. z \in \mathbf{u}, \text{ where } \mathbf{u} \text{ notates the addressee} \\
 \llbracket \text{duda} \rrbracket^f & = \{\iota z. z \in \mathbf{u}\}
 \end{aligned}$$

Even though (100) does contain both values, the relevant one for our purposes is the focus semantic value, as *duda*'s syntactic sister contains a focus-marked expression and hence only has the focus semantic value.

$$\begin{aligned}
 (101) \quad \llbracket \text{PredP} \rrbracket^o & \text{ is undefined} \\
 \llbracket \text{PredP} \rrbracket^f & = \{\lambda x. \lambda s. x \text{ knows } y \text{ in } s: y \in \text{language}\}(\text{you}) \\
 & = \{\lambda s. \text{you know } y \text{ in } s: y \in \text{language}\}
 \end{aligned}$$

In order to interpret the entire PredP, the subject DP must merge with a projection of the relative clause. Once the semantic computation has been completed, it can be appreciated that the semantic values of (88b) and (101) are identical, even though the routes leading up to them differed in a variety of ways. Equally, their combination with the Q-particle at the sentential level results in identical truth conditions.

How do the structure in (97) and its semantic interpretation in (98) through to (101) derive the properties of *in-situ* questions in Avar? Of particular interest are those properties which are asymmetric to those of the *ex-situ* cases, viz. the behaviour of *in-situ* questions with respect to reconstruction effects and island sensitivity as well as participialisation.

As far as the participial morphology on the verb is concerned, it is trivially accounted for by the fact that PredP contains a relative clause.

Next, the lack of island sensitivity follows from the fact that there is no relativisation operation crossing more than one clausal boundary; since the pseudocleft's pivot is a constituent different from the *wh*-phrase, the gap can easily be in the topmost clause, one of this clause's other constitutive parts being the atomised island as the output of a separate derivational layer. The island's focus semantic value will be inherited from the *wh*-phrase inside it. The following provides an illustration, where the question is repeated from (31a) above with the modification of the (subject) gap being graphically indicated in (102):

- (102) mun [__ roq'owe [š:iw w-ač'- a- rawgo] a- ra- w
 1SG:ABS home.M.LAT who.ABS M-come-PST-CVB go-PST-M
 'I went home when who arrived?'

The adverbial-clause island containing the *wh*-phrase *š:iw* 'who' appears as an atomic element in the numeration that precedes the derivation of the relative clause, whose subject is realised as the null operator doing the movement, precipitating λ -abstraction at the semantic interface.

The asymmetry with respect to reconstruction follows trivially from the fact that the *wh*-phrase has never left its position so as to lose the binding properties.

The story for case connectivity in examples like (93) is the same one as we have seen discussed in the *ex-situ* environments. Where the two stories differ is the exact case transferred to the subject via the predication relation mediated by Pred. The precise case value is not fixed and depends largely on what sort of relativisation is assumed.

The murkiest issue is that of multiple *wh*-questions. I have shown in §4.4 that those are indeed attested in Avar, and I have used that fact to dismiss Adger & Ramchand's (2005) base-generation approach as extendable to Avar. One possible way to generate a structure for the multiple *wh*-question in (74) would be to have the subject *wh*-phrase as the pivot, the other one being contained inside the relative clause in, essentially, a combination of the *ex*- and *in-situ* strategies analysed above and depicted in (103) below.

- (103)
-
- ```

 Pred
 / \
 D_wh C_[REL]
 / \
 / \
 / \
 ... D_wh ...

```

Given the by now familiar semantic values of the constituents in (103), the composition will proceed as follows:

- (104)
- |    |                                                  |                                                                                              |
|----|--------------------------------------------------|----------------------------------------------------------------------------------------------|
| a. | $\llbracket \_\_ kinab kwen kwarab \rrbracket^f$ | $= \{\lambda y. y \text{ ate } x: x \in \text{dish}\}$                                       |
| b. | $\llbracket \text{Pred} \rrbracket^f$            | $= \llbracket \text{Pred} \rrbracket^f (\llbracket \_\_ kinab kwen kwarab \rrbracket^f)$     |
|    |                                                  | $= \{\lambda z. \lambda s. z \text{ ate } x \text{ in } s: x \in \text{dish}\}$              |
| c. | $\llbracket kinaw hobolas \rrbracket^f$          | $= \{y: y \in \text{guest}\}$                                                                |
| d. | $\llbracket \text{PredP} \rrbracket^f$           | $= \llbracket \text{Pred} \rrbracket^f (\llbracket kinaw hobolas \rrbracket^f)$              |
|    |                                                  | $= \{\{\lambda s. z \text{ ate } x \text{ in } s: x \in \text{dish}\}: z \in \text{guest}\}$ |

The present approach differs from most other approaches that also appeal to Q-elements in that the Q-element is only invoked once the Pred head has combined with both its complement and its specifier, *pace* Cable (2010b), Kotek (2014). This seems unavoidable if the wh-questions are to be accommodated in the bigger family of focus constructions in Avar, and appears to resemble multiple wh-questions in certain languages with Q-particles, such as Japanese (Hagstrom 2000, 2004), where pair-list readings of multiple questions are generated in the presence of a single Q-particle.<sup>38</sup>

#### 4.5.2.3 Comparison with previous approaches

In this subsection I will draw a number of comparisons between the analyses of related phenomena already put forth in the literature and my own. For reasons of space, I concentrate exclusively on the proposals concerning the derivation of wh-dependencies by base generation and entirely ignore various movement-based analyses.

Now, the present proposal treats both *ex-* and *in-situ* wh-questions as biclausal constructions, pseudoclefts, to be more precise. In doing so it owes an intellectual debt, and therefore bears a fairly close resemblance, to approaches outlined in Kazenin 2002 (for Nakh-Daghestanian) and Potsdam 2006 (for Austronesian). Whilst Kazenin (2002) remains silent on the matter, Potsdam (2006) derives this headless relative clause by null operator movement, thus accounting for the observed crossover effects in Malagasy. My proposal outlined

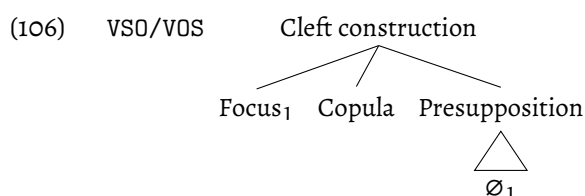
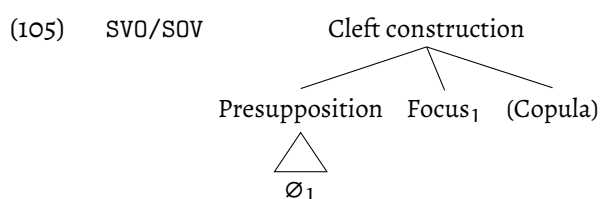
38. The availability of pair-list readings in multiple wh-questions in Japanese, exemplified in (i), presents a problem for those approaches which argue that each wh-phrase must be licensed by a distinct Q-particle (Kotek 2014).

(i) dare-ga nani-o kaimasita ka [Japanese]  
 who-NOM what-ACC bought.HON Q  
 ‘Who bought what?’ [Japanese, Hagstrom (2004: 246)]

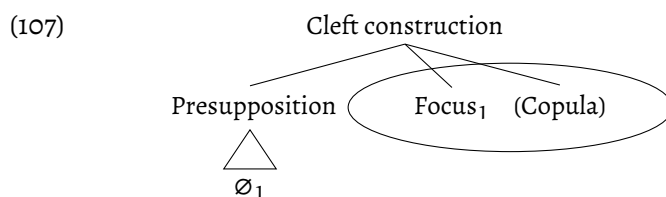
above adopts the same derivational mechanism to generate relative clauses.

Turning to *wh-in situ*, [Kazenin \(2002\)](#) and [Potsdam \(2006\)](#) choose very different paths to its derivation. For [Kazenin \(2002\)](#), the *in-situ* strategy merely represents a linearisation option, with focus sentences uniformly projecting a pseudocleft, which can be followed by the focused constituent (and the focus particle) moving, in a downwards fashion, to occupy the position of the gap. This lowering, according to [Kazenin](#), has an essentially functional motivation, having to do with the word order parameter. [Kazenin](#) establishes a correlation between the word order parameter for a given language and the availability in that language of clefting *in situ*.

Unlike predicate-initial languages, where the clefted constituent (the filler) linearly precedes the gap (106), SVO and SOV languages have their clefting constructions built in such a way that it is the gap which precedes the filler, given that focus in these languages is extracted to the right because the focus normally corresponds to the predicate (105).



For [Kazenin](#) the *in-situ* focus construction is a way to avoid the “gap-before-filler” order thus facilitating the parsing. On this view, the head (copula) and its dependent (clefted constituent), contrary to the generally assumed restrictions on movement, undergo lowering which targets a position inside the head’s other dependent (107).





There are several problems with such an explanation, functional motivations of the movement operation aside. [Kazenin \(2002\)](#) builds his case on the empirically erroneous observation about the unavailability of focused constituents in predicate-initial languages occupying the *in-situ* position. Whilst it may be true of argument focus constructions, this observation does not hold for constituent interrogatives, which, at least in Malagasy, can be realised *in situ*. Furthermore, [Kazenin's \(2002\)](#) approach has nothing to say about the differences in reconstruction effects described above.

#### 4.5.2.4 Wh-questions and scrambling

Keeping in mind that the general goal of this project is to find the correlations between structure, order and meaning, it is interesting to see how our two types of wh-questions interact with the phenomenon known as scrambling.

To do this, recall an indirect object wh-question (1) that featured in footnote 2 on p. 112, repeated here as (108):

- (108) baš:dab lie dica b-ičile- b  
 half.ABS who.DAT 1SG.ERG N-sell.FUT.PTCP-N  
 'Who will I sell the (other) half to?'

In (108) the direct object DP *baš:dab* 'half' linearly precedes both the subject DP *dica* 'I' and the indirect object realised as a wh-word *lie* 'to whom'. How does this state of affairs come about and how does it relate to the syntactic structures developed in the preceding subsections?

To answer this question a position is required as to the status of the leftmost noun phrase *baš:dab* 'half.ABS'. I treat it as an instance of Left dislocation, and follow [Ott \(2014\)](#), who analyses Contrastive Left Dislocation (CLD) as involving ellipsis. To be more precise, he ascribes to (109) from German the structure in (110).

- (109) Den Peter, den habe ich gesehen.  
 the Peter him have I seen  
 'I saw Peter.' (Ott 2014: 269)

- (110) [<sub>CP1</sub> [ den Peter ]<sub>i</sub> [ habe ich t<sub>i</sub> gesehen ] ] [<sub>CP2</sub> den<sub>k</sub> habe ich t<sub>k</sub> gesehen ]  
(Ott 2014: 270)

The structure in (110) treats CLD as arising out of two separate clauses (CP1 and CP2 above), there being no syntactic relation between them. Instead, the

connection is established at the discourse level.<sup>39</sup>

The Avar case, I argue, could and should be given a parallel treatment, represented schematically in (111), with the difference that the pronominal correlate of the dislocated expression, which is overt in German, is realised as *pro* in Avar, where *pro*-drop is relatively frequent, especially in spoken speech.

- (111) [Cl<sub>1</sub> baš:dab<sub>i</sub> [TP dica t<sub>i</sub> bičila]] [Cl<sub>2</sub> [PredP [lie] [[RelCl dica \_\_ *pro* bičileb] Pred]]]

I will tentatively assume that this version of the left-dislocation construction is interpreted as an instance of topicalisation, and depends on information-structural requirements as well as the structure of the discourse, based on the following. Unlike most of the data we have seen in this chapter, which were obtained in elicitation sessions with native speakers, (108) is an instance of textual data. Because of this, it, together with the surrounding context, can be subjected to discourse analysis. This sentence is the punchline to a joke from the *Millat* newspaper, which, for the sake of concreteness, I reproduce here *in toto*.<sup>40</sup>

- (112) bazaralda čaq'u bičulew řisada c'exanila:  
market.LOC sheep.ABS N-sell.PRS.PTCP:M Isa.LOC ask.FUT  
'At the market, Isa asks the sheepmonger:'

Q: hařul baha ř:ib  
this.GEN price.ABS what  
'How much is this one?'

A: k'inusgo řuruř:  
two.hundred ruble  
'Two hundred rubles'

Q: nusgojalde l'elar= iř:  
hundred.ALL give.FUT:NEG=Q  
'One hundred, maybe?'

A: bař:dab lie dica b-ičile- b  
half.ABS who.DAT 1SG.ERG N-sell.FUT.PTCP-N  
'Who will I sell the (other) half to?'

Now, by the time the punchline is delivered, the concept of the half (of both the price and the sheep) will arguably have become salient enough for both the speaker and the reader to function as a discourse-old, given, topic with respect to the punchline. This seems compatible with the conclusion of Kučerová

39. Instead of repeating Ott's (2014) arguments I refer the reader to the original paper.

40. <http://www.millat.ru/index.php/politika/437-kepalhardal.html>

(2012) that in a certain local domain in a discourse-configurational language, no non-given element can c-command any given element: if *baš:dab* is topicalised to the left periphery, it is not c-commanded by any other argument.

## 4.6 Conclusions and open questions

### 4.6.1 Conclusions

In this chapter I have been examining the structure of matrix constituent interrogatives in Avar. I have argued that unlike their English counterparts, none of the matrix *wh*-questions in Avar are derived by the simple extraction of the *wh*-phrase to any appropriate position in the clausal spine. I have claimed, instead, that Avar is a proper *in-situ* language with the fronted and right-extraposed *wh*-elements being either base-generated in, or predicate-fronted to, their surface position.

I hope to have demonstrated that questions featuring an *ex-situ* position of the *wh*-phrase instantiate a predication construction, a pseudocleft of sorts, which involves a relative clause combining with a Pred head (Bowers 1993, Mikkelsen 2005). Most importantly, we have seen some language-internal empirical evidence for this *wh*-phrase originating outside of the relative clause.

*In-situ* *wh*-phrases, and the structures containing them, have been shown to display a cluster of significantly different properties, thus calling for a special treatment. Pushing the base-generation strategy further, I have followed Potsdam 2006 in analysing the *in-situ* constructions as having the *wh*-phrase in its original position inside the relative clause.

Finally, as far as semantic interpretation is concerned, I have employed Alternative semantics to give *wh*-questions a Hamblin/Karttunen analysis. In the coming chapter I attempt to accommodate the Avar *wh*-question construction within the arguably broader family of focus-marking constructions.

### 4.6.2 Open issues

There are several question-related issues that I have not been able to fit within the confines of the present chapter, nor the entire thesis. One of these concerns the availability, in Avar, of multiple *wh*-questions, which I have only mentioned in passing. It appears that the approach developed here faces certain difficulties when an attempt is made to generate a question only allowing for a pair-list answer. It is nevertheless my opinion that the current analysis is an improvement on the others.

The second issue concerns the structure and interpretation of embedded *wh*-interrogatives. These have been omitted from the discussion on purpose, mainly to avoid speculation regarding their exact derivation and interpretation, since very little is yet understood about the manner in which indirect questions attach to the embedding predicate, and the differences between various embedding elements as well as even a taxonomy of these. It is my hope that once more is known about the syntax and semantics of clausal embedding, the current analysis will prove to be compatible with it.

With this in mind, we proceed to investigate the intricacies of Avar focus marking in the next chapter.

